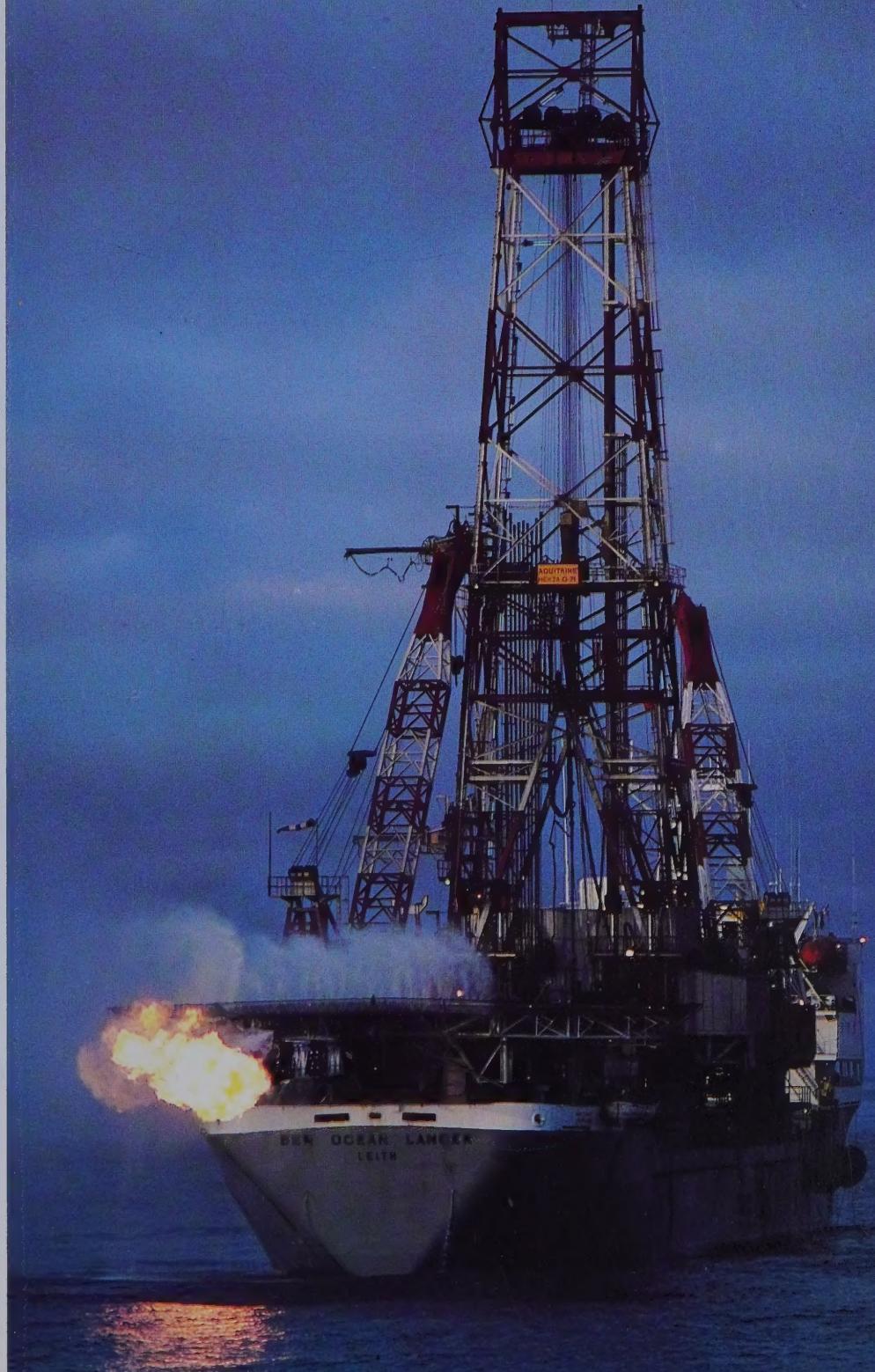


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AQUITAINE  
COMPANY  
OF CANADA LTD.

1980  
ANNUAL  
REPORT

# COMPANY PROFILE

## Aquitaine Company of Canada Ltd.

(Aquitaine) is a public company engaged in exploration for oil and gas and hardrock minerals in Canada and the United States. It produces oil, gas liquids, gas and sulphur in Alberta, oil in northwest United States and coal in Pennsylvania.

Incorporated in Canada in 1963 as a wholly-owned subsidiary of Société Nationale des Pétroles d'Aquitaine (SNPA) of France, Aquitaine went public in 1968. In 1971 the Company acquired all the business and properties of Banff Oil Ltd., a company in which Aquitaine had acquired a minority interest in 1964. Joint ventures of the two companies included the Rainbow Lake major oil discovery in 1965 and Strachan and Ricinus gas discoveries in 1968 and 1969.

In early 1975 Aquitaine purchased Westrans Industries, Inc. (now Aquitaine Pennsylvania, Inc.) and became involved in coal mining in Pennsylvania. A year later, as part of a reorganization involving its parent company, Aquitaine acquired Elf Exploration and Production Canada Ltd., one of the earliest petroleum explorers in the Canadian Arctic. Early in 1979, Aquitaine completed the acquisition of Universal Gas Co. Ltd.

Another wholly-owned subsidiary, Al-Aquitaine Exploration, Ltd. based in Denver, is responsible for all United States oil and gas exploration and production.

The Company's shares are now held approximately 16.8% by investors in Canada, 8.4% by investors in the United States and other foreign countries and 74.8% by Société Nationale Elf Aquitaine (SNEA) in France. SNEA, in turn, is owned approximately 67% by Entreprise de Recherches et d'Activités Petrolières (ERAP), a French agency. SNEA's shares are listed on the Paris and Brussels stock exchanges. Aquitaine's shares are held by approximately 5 515 registered shareholders and are listed on the Toronto, Montreal and American stock exchanges.

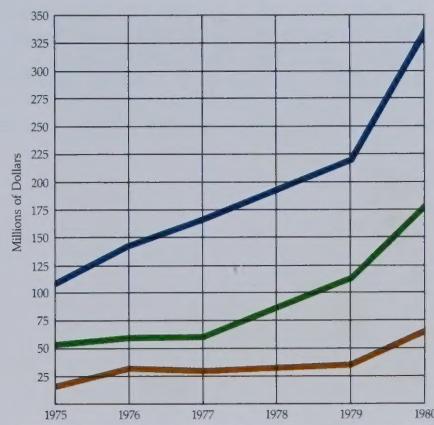
### *Cover photo:*

*The flare from the test of the Hekja well provides dramatic proof of the presence of gas. This test from the Ben Ocean Lancer set world records as the longest — eight hours — and the most northerly test carried out from a dynamically-positioned drillship. It was also one of the deepest offshore tests conducted in Canadian waters.*

# COMPARATIVE HIGHLIGHTS

Financial (in thousands except per share amounts)

	1980	1979	% Change
Revenues	\$337,640	\$224,124	+ 51
Sales (Gross before royalties)			
Oil and gas liquids (thousands of cubic metres)	1 822	1 832	- 1
Gas (millions of cubic metres)	1 325	1 215	+ 9
Sulphur (thousands of tonnes)	1 181	715	+ 65
Coal (thousands of tonnes)	1 364	1 165	+ 17
Net earnings			
Total	\$ 65,057	\$ 32,617	+ 100
Per share	\$3.02	\$1.51	+ 100
Return on equity	23%	14%	+ 64
Cash flow from operations			
Total	\$178,021	\$115,668	+ 54
Per share	\$8.26	\$5.37	+ 54
Capital and exploration expenditures	\$178,512	\$146,217	+ 22
Property acquisitions	\$ 25,883	\$ 26,312	- 2
Exploration — oil, gas and sulphur			
Capitalized	\$ 43,960	\$ 26,592	+ 65
Expensed	\$ 38,389	\$ 43,436	- 12
Increase (decrease) in exploratory drilling in progress	\$ 9,146	\$ (740)	—
Development — oil, gas and sulphur	\$ 53,401	\$ 29,617	+ 80
Coal	\$ 2,142	\$ 8,613	- 75
Mining exploration expensed	\$ 3,018	\$ 1,930	+ 56
Office building	\$ 2,573	\$ 10,457	- 75
Land holdings (thousands of hectares)			
Gross	19 415	22 554	- 14
Net	7 031	9 766	- 28
Reserves (Gross before royalties)			
Oil and gas liquids			
(millions of cubic metres)	16.7	18.7	- 11
Gas (billions of cubic metres)	23.6	21.4	+ 10
Sulphur (millions of tonnes)	11	11	—
Coal (millions of tonnes)	62	66	- 6



COMPARATIVE HIGHLIGHTS

Revenues

Cash Flow From Operations

Net Earnings



Attending the Company's Board meeting in Calgary in November were: Standing (left to right) F. Morel, Director; C. R. M. Bertrand, Vice-President Finance; W. S. Wright, Director and General Counsel; M. E. Hriskevich, Senior Vice-President of Exploration and Special Projects; H. R. Martial, Vice-President Production; W. D. Clark, Director; G. D. DeS. Wotherspoon, Director; J-Y Chereau, Director; Sitting (left to right) J. D. Redfern, Director; H. G. Pearce, Director; B. F. Isautier, President; N. F. Phillips, Director and D. C. Jones, Director.

# PRESIDENT'S REPORT

We are pleased to report to our shareholders outstanding financial and technical results for the year 1980: revenues, net earnings and cash flow reached record high levels through improved performance of all the Company's lines of business.

Oil production in the United States doubled and, for the first time, represented a significant contribution to the cash flow of the Company. While the petroleum industry in Canada experienced a decline in gas sales, the Company was able to increase its gas sales in addition to receiving higher prices. Demand for sulphur was strong both in the international and the domestic markets: the Company benefitted from much higher prices and increased its sales volumes. The Company is the second largest sulphur producer in Canada and now receives a substantial share of its total revenues from the sale of this product.

Our coal operations in Pennsylvania experienced substantial improvement reversing the trend of the past five years. In a still difficult business environment, the Company achieved an increase in sales mainly through export contracts and a reduction of costs through improved productivity.

The Company continued an aggressive capital expenditures program with emphasis on exploration. Exploration in the western sedimentary basin of Canada resulted in an increase of 10% in the Company's gas reserves and a total replacement of the sulphur sold during the year. Oil reserves continued to decline in Canada but more than doubled in the United States. In frontier regions of Canada, the Company participated in two discoveries: Issungnak in the Beaufort Sea and Hekja on the east coast. Our minerals explorations program brought some encouraging results in Nova Scotia where uranium deposits are being evaluated.

The National Energy Program presented by the Federal Government of Canada on 1980 October 28 clouds the outlook for the whole Canadian oil and gas industry.

While the stated objectives of the National Energy Program — self-sufficiency, equitable sharing of revenues between federal and provincial governments and increased Canadian ownership — are legitimate, we feel the means proposed to achieve these objectives are inappropriate and if maintained will cause serious damage to the industry and Canada's economy.

The pricing and fiscal regime proposed by the National Energy Program combined with the present high taxation at the provincial levels will result in insufficient return to the producers to provide internal funds for current exploration and to provide the economic justification for such exploration in the future. In some cases, particularly in Saskatchewan and British Columbia, the combination of provincial and federal taxes will result in a net loss for the producers.

Our Company is particularly hurt by the non-deductible Petroleum and Gas Revenue Tax (PGRT) of 8% on its revenues from Rainbow. Even before the National Energy Program, the returns were among the lowest in the world due to the high rate of Alberta royalty (50%) on Rainbow oil production which is not deductible for federal income tax calculations. The addition of the PGRT has now made further infill drilling uneconomic. This cancellation of the Company's infill program at Rainbow, decided on following the announcement of the National Energy Program, will result in a saving of \$10 million which would otherwise have been spent on capital expenditures by the Company and its partners; in a reduction of

954 thousand cubic metres of oil production over the next five years and an increase in foreign oil imports of about \$300 million. This shows that the biggest losers from excessive taxation are both levels of government and the economy of Canada.

Oil production cutbacks instigated by the Alberta government in response to the Federal National Energy Program should have a relatively minor effect on the earnings of the Company since it applies to an already small netback.

The Company still hopes that discussions now being held between the federal and provincial governments will result in a reasonable compromise. It is now obvious that taxation at two levels of government cannot be decided independently; the complete taxation regime must be consistent from an economic point of view and discussions concerning sharing of revenues should take place within a coherent national taxation regime.

The National Energy Program contains other provisions that would deeply affect the confidence of the industry whether Canadian-owned or foreign-owned, if they were maintained in their present form. Of particular concern to our Company, is the retroactive confiscation of a 25% interest in all Canada lands under federal jurisdiction without compensation, plus a carried interest of 25% granted to Petro Canada for future exploration and the unilateral abrogation of the time limits of existing permits, all such measures being without precedent in the western world. The Company recognizes the sovereign right of the Government of Canada to adopt new rules but thinks that when these new rules are an abrogation of existing rights, fair compensation should be granted after negotiations.

Other elements of the National Energy Program seem to reflect an underlying philosophy that does not recognize the nature of our industry: future prices applied to production on Canada lands are not defined and would be decided case by case; pioneers after their success could receive less favorable treatment than latecomers who need a better regime to proceed; activities on Canada lands would be subject to discretionary decisions without any guidelines for the enactment of these new discretionary powers. Such a philosophy would seem appropriate for a utility industry but is inadequate for the oil and gas industry which needs the prospect of high rewards for the high risk taken and a high level of stability to accept the long lead times between expenditures and actual revenues.

The National Energy Program, however, contains many positive measures to reduce the cost of exploration in frontier areas, to promote production of non-conventional oil such as tar sands, heavy oil and tertiary recovery oil and to promote conservation of energy. These measures still require some adaptation to become fully effective but they represent a significant move at least in the Government's attitude towards what is needed for Canada to achieve self-sufficiency.

By contrast with the Canadian situation, the investment climate in the United States following several years of uncertainty is now quite attractive; price decontrol for oil and prospects of a possible decontrol of gas prices enhance the outlook for our United States oil and gas operations. We intend to continue an aggressive exploration and development program of our acreage in the Williston Basin, and expect to show substantial growth in the coming years in terms of revenues, cash flow, production and reserves.

We anticipate that the cash flow from our coal operations will remain modest in the short term. We feel, however, that some basic trends will have a positive effect in the medium term. Demand on the export market is, and should continue to be, extremely strong, and improvement of port facilities should facilitate increased export shipments from United States producers. The combination of increased exports and increased domestic consumption should bring much higher prices at least at the level required for the development of new production capacities.

Overall, although our financial results in Canada will be reduced in 1981 by the National Energy Program compared with what they would have been, we expect to perform better in the coming year than the average company in the Canadian oil and gas industry. Increased revenues from our United States operations and from gas processing contracts and sulphur sales that are not affected by the National Energy Program should more than offset the decline of net revenues from Canadian oil and gas operations.

We still believe strongly that Canada has a vast potential for oil and gas production in both conventional and frontier areas. We also believe that the economy of Canada cannot afford for that potential to be negated and that appropriate governmental decisions will have to be made. We have faith in the fundamental sense of equity and fairness of the Canadian people which should sooner or later lead to a correction of the excessive aspects of the National Energy Program.

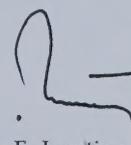
Pending the results of the negotiations between the federal and the provincial governments and pending clarification of the National Energy Program, we are taking a moderate attitude and plan to maintain our exploration program in Canada at a level comparable to 1980 stopping, however, the trend of the huge increases over the last three years.

Should, in one year from now, the present conditions remain unchanged, the Company regretfully will have to implement a shift in strategy.

William D. Clark, senior vice-president, who has been with Aquitaine since 1965, left the Company as an executive in August but remained as a Director and Chairman of the Finance Committee. The Board of Directors was increased to 12 members with the addition of three Canadians, H. Gordon Pearce, John D. Redfern and W. Stewart Wright.

During the year the head office and Calgary staff moved into Selkirk House, our new office building. We continued to recruit actively and our Canadian staff has grown from 472 to 538. We believe that our employees are our most important asset and an asset that must be preserved. Benefits and incentives were improved, particularly the pension plan and the stock bonus plan.

On behalf of the Board, I want to thank each one of them for their dedication and efforts which made 1980 such an exceptional year for Aquitaine.



B. F. Isautier  
President

# EXPLORATION



# EXPLORATION

## Summary

The exploration activities in 1980 of Aquitaine and its subsidiaries were maintained at a high level, continuing the trend which had been established in 1979.

As in 1979, exploration in Canada was principally concentrated in western Alberta, particularly in the general Gold Creek-Elmworth and Pembina-Brazeau areas with continuing good success in establishing gas reserves. A gas discovery offshore Baffin Island and an oil and gas discovery in the Beaufort Sea, whilst requiring substantial further evaluation, may have significant long term value for Aquitaine. Exploration in the United States continued in the Williston Basin with the discovery of four new oil fields which more than doubled the Company's U.S. reserves.

Exploration expenditures including property acquisitions in 1980 were up 23% compared with 1979. The allocation of these expenditures was 75% to conventional areas and 25% to frontier areas.

Aquitaine and its partners conducted geophysical operations in many potentially prospective areas throughout Canada and in Montana and North Dakota in the United States. Approximately 15 800 kilometres of seismic data and 225 800 kilometres of gravity/magnetic data were acquired at a cost of \$11.2 million. An increasing proportion of these geophysical projects were operated by Aquitaine or its subsidiaries. A large percentage of the acquired data was processed by the Company's sophisticated computer facilities.

During the year Aquitaine spent \$23.8 million in acquiring 41 000 net hectares of petroleum and natural gas rights in Alberta and 13 000 net hectares in British Columbia, resulting in a small increase in net holdings in western Canada. Expiry of a number of evaluated permits in frontier areas, particularly in the

Arctic Islands, caused a reduction of 2 800 000 net hectares in these areas. Included in these frontier relinquishments were the Company's remaining holdings in Hudson Bay, thus terminating a project which had commenced in 1964. Aquitaine's petroleum and natural gas holdings in Montana and North Dakota increased by 6 000 net hectares in 1980.

Aquitaine participated with varying interests in drilling 276 exploration and development wells in 1980 with 50 of these wells drilled at no cost to the Company. This program, which was a small decrease from the 284 wells drilled in 1979, resulted in the completion of 91 oil wells, 90 gas wells, 61 abandonments and two suspended tests. The number of wells operated by Aquitaine increased slightly in 1980 compared with 1979. A total of 32 wells were drilling or drilling was suspended at year end. The following table details the results of completed test.

Exploratory Wells	1980					1979				
	Oil	Gas	Abandoned	Suspended		Oil	Gas	Abandoned	Suspended	
Alberta	4	(1.3)	40	(10.7)	18	(6.3)	2	(0.4)	10	(1.1)
British Columbia			2	(0.4)	3	(2.4)				3
Quebec										1
East Coast Offshore			1	(0.5)	5	(0.9)			1	(0.2)
Arctic										1
Beaufort			1	(0.02)					1	(0.3)
Yukon										1
Total Canada	5	(1.3)	43	(11.6)	26	(9.6)	2	(0.4)	10	(1.1)
Success Ratio			.615						.652	
Montana	3	(0.5)			3	(0.4)			4	(0.5)
North Dakota	5	(2.5)	1	(0.02)	8	(2.2)			15	(4.2)
Alaska					2	(0.1)			1	(0.1)
Total U.S.A.	8	(3.0)	1	(0.02)	13	(2.7)			19	(4.7)
Success Ratio			.409						.625	
Carried Interest Wells	19		9		13				2	
Development Wells									5	
Alberta	23	(4.3)	35	(5.1)	2	(0.04)			23	(4.8)
British Columbia					1	(1.0)			59	(8.0)
Montana	11	(0.9)							3	(0.2)
North Dakota	24	(4.8)			6	(1.6)			6	(0.9)
Total	58	(10.0)	36	(6.1)	8	(1.6)			32	(5.9)
Success Ratio			.921						.958	
Carried Interest Wells	1		1		1					1
Total	91	(14.3)	90	(17.7)	61	(13.9)	2	(0.4)	63	(11.7)
									129	(20.0)
									52	(15.4)
									5	(1.4)

Carried interest wells have not been defined geographically in this table.

## 1980 AND 1979 DRILLING STATISTICS (net figures in parentheses)

Oil and gas exploration is not restricted to field work. Back in his office, Roger Higgs, an Aquitaine geologist, conducts microscopic examination of cuttings samples from a recent gas discovery. Geophysical well logs projected on the viewing screen allow accurate correlation of samples.

## Alberta

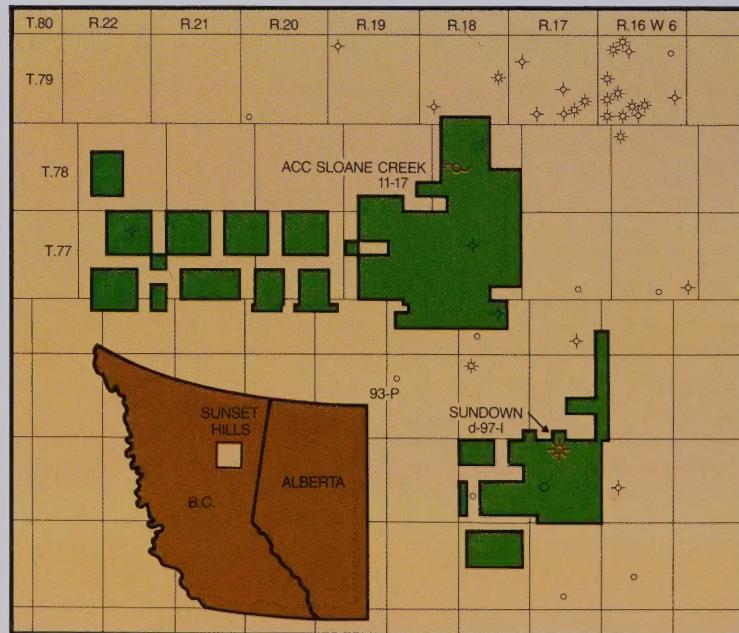
The Company participated as to a working interest in 64 (18.7) tests in Alberta in 1980. This activity resulted in 40 (10.7) gas wells and four (1.3) oil wells.

In the **Pembina-Brazeau** area of western Alberta, the Company maintained a high level of exploration activity on its 83 000 hectare holdings with additional seismic and participation in ten exploratory wells. The 1980 program resulted in four gas wells from deep reef reservoirs. The most significant completion was the five kilometre extension test to the Brown Creek gas discovery drilled in 1979. This step-out test flowed at a stabilized rate of 615 000 cubic metres per day from a 45 metre net pay section. Three deep tests were drilling at the end of the year, two on a possible southern extension to this trend and one to confirm the extension of the Hanlan gas field onto wholly-owned Aquitaine leases.

In the **Alberta foothills**, the Company is presently drilling two deep structural prospects under farmout agreements at Shunda and Reilly with participating interests of 50% and 33% respectively. These wells are attempting to evaluate potential gas reserves in formations below 5 500 metres, which is deeper than previously investigated in these areas. Both wells have incurred drilling costs in the range of \$10-15 million partially as a result of well control or related drilling problems. A third foothills well, drilled on the Cutoff structure north of our earlier discovery, was abandoned earlier this year.

Drilling in the **Deep Basin** play of western Alberta continued throughout 1980 on the Company's 170 000 hectare Gold Creek-Wapiti-Elmworth properties.

Aquitaine participated with varying interests from 1.6% to 70% in 26 wells which resulted in 19 gas and six oil completions. Since commencement of the program in 1976, 73 gas and 11 oil completions have been made on these properties.



### SUNSET HILLS

■ AQUITAINTE ACREAGE

1980 WELLS — RED

★ GAS WELL

○ DRILLING WELL

○ LOCATION

After completion of the work requirements to protect the Company's land holdings and in the absence of any market in the near future for most of this gas, the level of exploration in 1981 is expected to be reduced significantly. Production testing will continue, however, for determination of production capability of these wells, most of which have indicated production in several zones.

In **southwestern Alberta** a six well drilling program at Spring Coulee, where the Company holds a 42.19% interest, resulted in four successful completions in a shallow gas zone. At Davey Lake a seven well program provided two pool extensions with two oil completions and two gas completions. Aquitaine's interest at Davey Lake is 31.25%.

Elsewhere in the plains area of Alberta, pool extensions were achieved at several localities. At Wolf Creek, a high deliverability gas prospect was drilled. At Sinclair, two successful gas completions were made and at Ferrier, the Company participated in two potential oil wells. Aquitaine's interest in these wells is 16.6%, 18.75% and 33.3% respectively.

In **northern Alberta**, the Company participated in two exploratory tests for Devonian reef objectives in the Rainbow and Golden areas as to a 100% and 12.5% interest respectively. Although neither was successful in the primary objective, gas reserves were indicated for both wells in shallower zones. An exploratory well in the Rainbow area was drilling at year end.

In the **eastern Alberta plains** the Company participated in 17 (4.0 net) shallow exploratory wells, resulting in nine (2.8 net) gas wells. Most of this activity took place in the Hay River and Rainbow areas of northern Alberta and the Wandering River and Provost areas of eastern Alberta and contributed modestly to the Company's reserves.

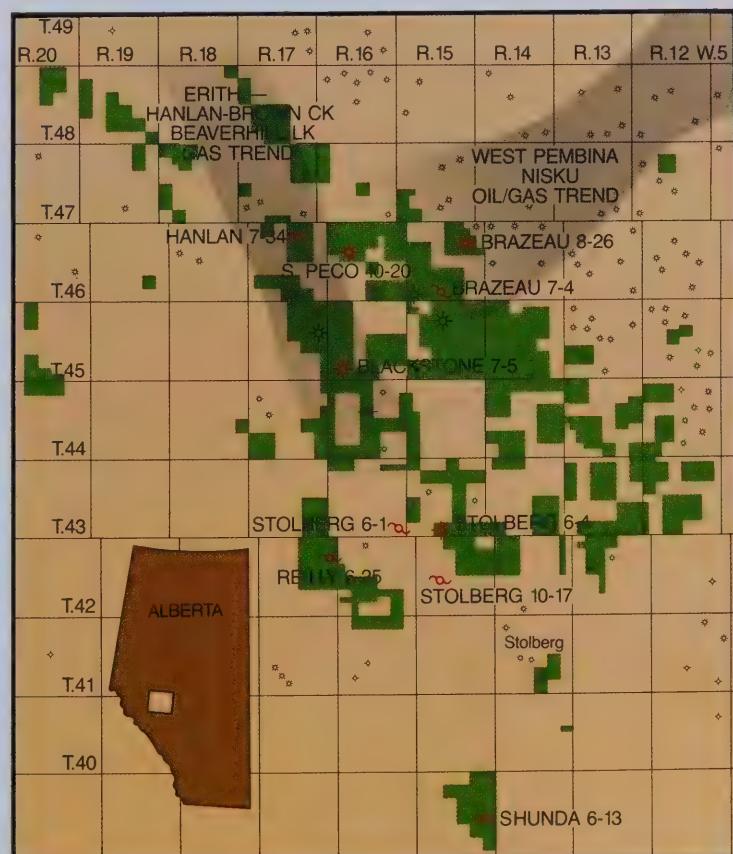
## British Columbia

A successful well operated by Aquitaine in the **Boudreau area** added to the known reserves of the area. The well, in which the

Company has an 18.75% interest, flowed at rates up to 43 000 cubic metres per day from the Triassic Halfway Formation.

The Company drilled three unsuccessful wells in the general **Maxhamish area** in an attempt to follow up previous successes. Aquitaine's interest in these wells was 70%. No additional exploration is planned for this area.

A significant deep test in the **Sundown area**, in which Aquitaine participated for a 25% interest, was being evaluated at year end. Although the deepest objective, the Triassic Halfway was not productive, encouraging results were obtained in shallower zones which will require further evaluation.



## BRAZEAU • STOLBERG

1980 DRILLING ACTIVITY

■ AQUITAINE ACREAGE

○ DRILLING WELLS

★ GAS WELL

◆ ABANDONED

◆ 1980 GAS WELLS

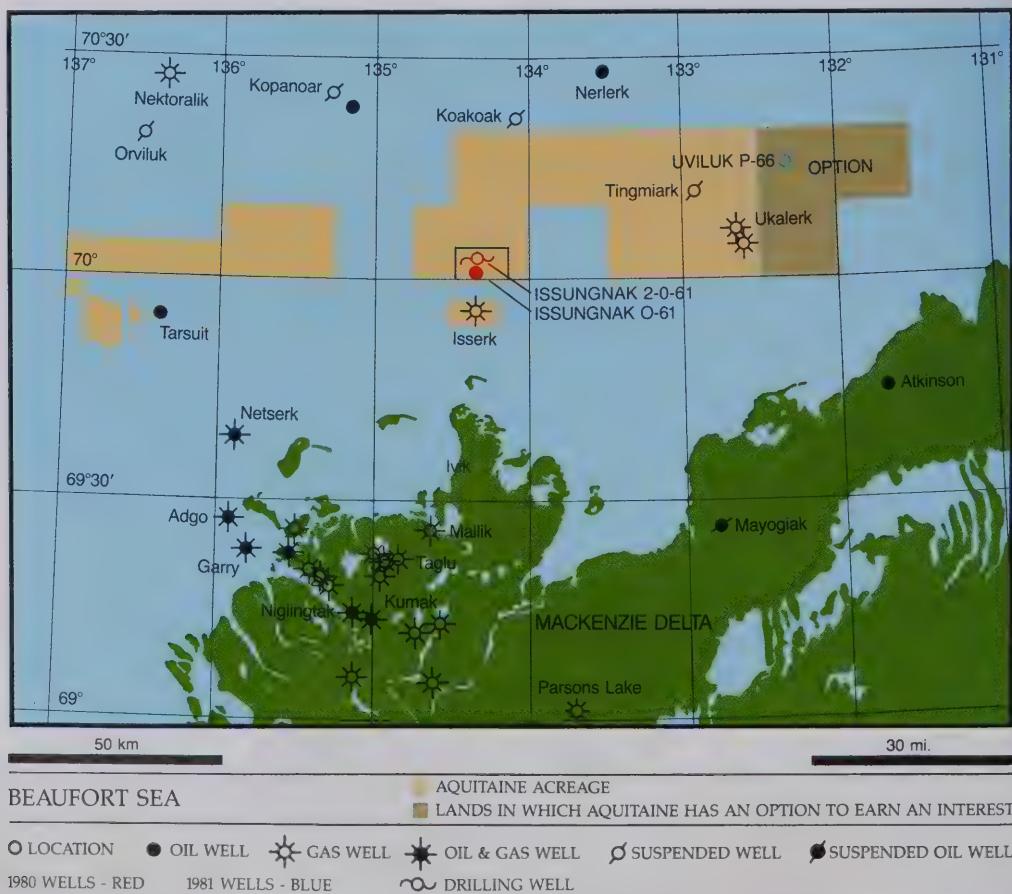
1980 WELLS — RED

AQUITAINE 9

## Beaufort Sea

The Esso et al Issungnak O-61 test well, 80 kilometres north of the Taglu field, was completed at a total depth of 3 583 metres. Aquitaine now has a 15.15% interest in this well and in the 6 383 hectare block surrounding it. The well was drilled from an artificial island which was constructed in 20 metres of water. Construction of the island involved the dumping of over four million cubic metres of material, making the entire operation one of the most expensive wells ever drilled in Canada. Testing of the well resulted in a flow of 385 cubic metres per day of 35° API oil from a zone near 3 000 metres in depth. Other tests produced substantial amounts of gas and condensate and an additional indication of oil. A directional offset well was spudded early in October, to further evaluate the reservoirs encountered and to probe deeper zones in the structure.

Adverse ice conditions during the summer of 1980 hampered progress on two other Beaufort Sea wells in which the Company has an interest. The Kilannak A-77 test well, 140 kilometres east-northeast of the Ukalerk gas discovery, is being drilled at no cost to Aquitaine under a farmout agreement; it had to be suspended after surface casing was set. This well is on a 190 000 gross hectare block of permits in which the Company presently has a 60% interest. The Uviluk P-66 test well, licensed to a depth of 4 870 metres, could not be carried beyond preliminary site preparations. The location is 20 kilometres northeast of Ukalerk on a 105 000 hectare block of permits in which the Company will have a 5.5% interest after its 10.9% participation in the drilling of the well. Both wells are now scheduled for drilling in 1981.



## East Coast Offshore

In southern Davis Strait, southeast of Baffin Island, the Aquitaine Hekja O-71 test well, suspended last year at 3 268 metres, was re-entered and drilled to a total depth of 4 566 metres. While no new reservoirs were found below the sand section first encountered at 3 203 metres in 1979, a total of 74 metres of gross sand section was opened up. On a drillstem test, three perforated intervals flowed gas at 264 000 cubic metres per day and 54° API condensate at 17 cubic metres per day. Preliminary evaluations based on the test results from this single well and seismic information suggest the presence of a gas pool which could contain up to 66 billion cubic metres, although further drilling will be required to fully determine and evaluate the extent of the reserves discovered. Possible production methods are currently being studied, although because of the well's location and the difficult environment it cannot be predicted whether these gas reserves can be produced commercially. Aquitaine is operator of the Baffin-Labrador Group and has a 40% interest in the 490 000 hectare block on which the well is located as well as higher percentage interests in other permits in the general area.

On the Labrador Shelf three drillships were under contract in the summer of 1980 to the Labrador Group in which Aquitaine participates for 18.83% to earn an additional interest. Under a partial farm-in agreement, the Company will increase its interest to approximately 16.5% from the original 13.33% in the nine million hectares the group holds under permit.

The Gilbert F-53, Roberval C-02 and Ogmund F-72 wells were drilled and abandoned without encountering hydrocarbons. Two new wells, Bjarni North F-06 and Leif North I-05, were spudded. Surface casing has been set in these wells; drilling will be completed in a following season. Further testing operations on Bjarni O-82, a 1979 well which flowed gas and condensate, were unsuccessful. Verrazano L-77, drilled in 1976 was officially abandoned during the year.



## Alaska

The Exxon Pt. Thomson Unit No. 4 well bottomed at 4 022 metres, but failed to find encouraging quantities of hydrocarbons and was abandoned.

Aquitaine participated as one of 17 companies in the drilling of a Continental Offshore Stratigraphic Test (COST) well in the Norton Sound portion of the Bering Sea. Seismic surveys and the data from the COST well will help the Company in the evaluation of acreage which is expected to be posted for sale in 1982.

## Northern United States

Aquitaine participated in 63 wells during 1980 resulting in 43 oil wells and one gas well, for a combined overall success ratio of 69.8%.

Exploration activity for 1980 was highlighted by the discovery of four new fields by the Company: the Chateau field, the Epping field, the Sioux field and a field in the Griffith Creek area. In one of these areas, the Sioux Field, an outpost well is currently being drilled, and an offset to the discovery well will commence early in 1981.

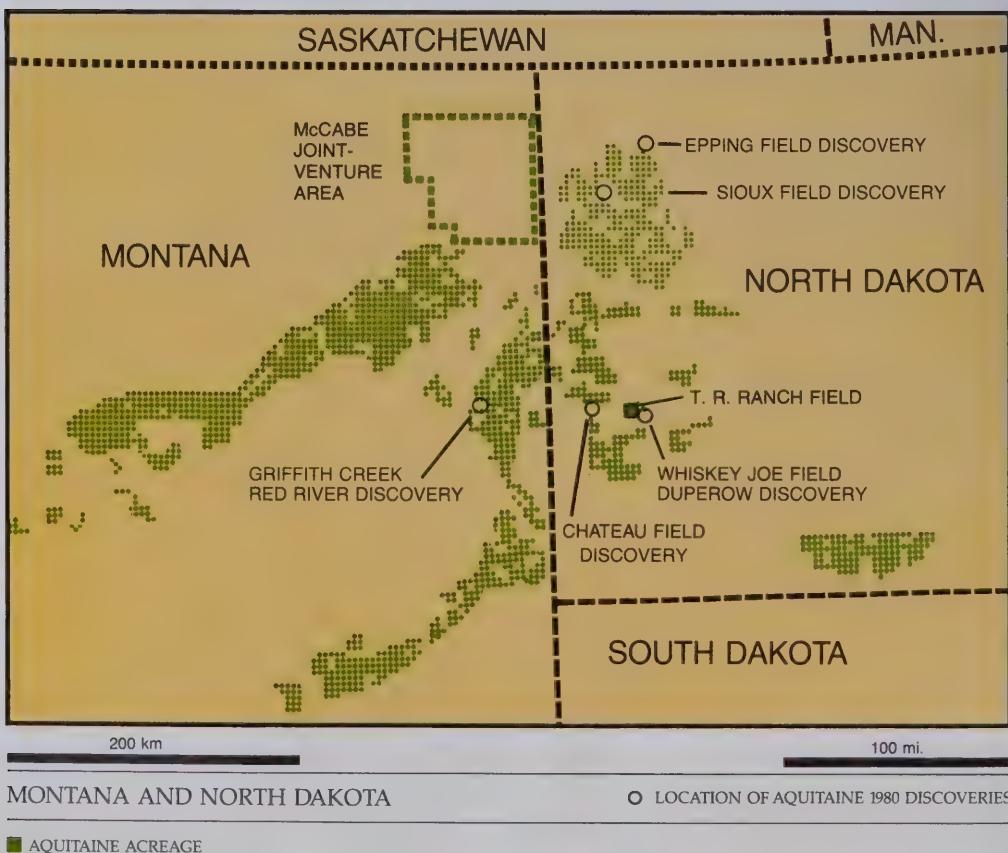
The T.R. Field continues to be an area of intense activity for the Company. In this field Aquitaine participated with varying interests in 15 additional oil wells, with the result that by year end, it had an interest in 26 producing oil wells. The nearby Whiskey Joe Field has also seen considerable activity, with

a total of seven wells on production, five more than last year. Two of these new wells are producing from a newly discovered deeper pool.

The Company has continued its participation in further development of the Bicentennial, Beaver Creek, Mondak and Poker Jim Fields.

During the year, Aquitaine participated in 3 039 kilometres of new seismic data, of this 1 120 kilometres were shot 100% by the Company.

The Company retains a varying interest in 132 000 gross hectares in North Dakota, and 358 000 gross hectares in Montana. Included in this figure are the McCabe Joint Venture lands in northeast Montana, where Aquitaine has earned 10 522 gross hectares by drilling and has the option to earn an additional 12 141 gross hectares.



It is expected that exploration and development activity in 1981 will proceed at an accelerated pace, with the Company operating an average of six drilling rigs in its area of operation.

## MINING

During 1980 the Company spent approximately \$3 million on mining exploration on its mineral holdings located across Canada and the New England states. Approximately 50% was spent on the search for uranium on six specific projects. The remaining half was directed to base metal (copper-lead-zinc) exploration on seven projects. All of this program was by joint venture, in part, Aquitaine operated. Aquitaine's interest in these joint ventures ranges from 22% to 67%.

## Uranium Exploration

In the Maritimes, Aquitaine as operator of a two company joint-venture continued uranium exploration predominantly in Nova Scotia with very encouraging results. An accelerated diamond drilling program is scheduled to continue in 1981 in this area and is expected to prove sufficient reserves that could justify a small mining operation in future years. To meet the increased demands of such an active exploration program in the region, a field office was opened at Windsor, Nova Scotia. A large number of exploration licenses were acquired following an extensive airborne radiometric survey. Surface exploration focused on the Millet Brook prospect where the extensive drilling program indicated several mineralized structures, which the company believes may be of commercial value. Close contact is being maintained with the Nova Scotia Government regarding development of guidelines for uranium exploration and development and associated environmental control.

Additional drilling on the Dismal Lake property in the Northwest Territories failed to extend substantially the uranium trend delineated in 1978-79. The project is below the level of economic viability at present.

## Base Metals Exploration

An intensive lead-zinc-silver exploration program was carried out in the Paleozoic shale belts of British Columbia and the Yukon. Diamond drilling was implemented on three separate projects and resulted in the delineation of additional mineralized horizons. These will warrant further evaluation during 1981.

Exploration continued at an accelerated pace at Hay West where investigation is proceeding on a possible westward extension of the carbonate facies which hosts the lead-zinc ores of the highly productive Pine Point mining district of the Northwest Territories. Seismic work and reconnaissance diamond drilling has succeeded in partially delineating the rock facies which is most likely to host the sulfide mineralization. Work will proceed in 1981 at the same level of activity as 1980.

Target evaluation for copper continued on prospects in New Hampshire and Maine.



## MINING EXPLORATION ACTIVITY 1980

● BASE METALS Cu, Pb, Zn      ● URANIUM

# WELL DRILLING RECORD

Working Interest (%)	Depth metres	Status	Working Interest (%)	Depth metres	Status				
<b>AQUITAINE OPERATED EXPLORATORY WELLS</b>									
<b>Alberta</b>									
Aquit Mobil Cutoff 5-7-35-11 W5M	50	4105	Abandoned	Amoco et al Blackstone #2 7-5-45-16 W5M	36.6	4768	Gas		
Aquit Braz R 8-26-46-15 W5M	100	3860	Gas	Amoco et al Steep 7-28-66-7 W6M	7.5	2358	Suspended		
Aquit Shunda 6-13-39-15 W5M	50	4870	Drilling	Amoco et al Stolberg 6-4-43-15 W5M	10	5103	Gas		
Aquit et al Gold Creek 11-13-66-4 W6M	70	2459	Gas	Amoco et al Blackstone 6-22-45-17 W5M	35.3	3023	Suspended		
Aquit Rains 10-16-106-10 W6M	100	585	Abandoned	Amoco et al Steep 2-28-66-7 W6M	7.5	1332	Abandoned		
Aquit Rains 6-20-106-10 W6M	100	585	Gas	Amoco et al Elmworth 7-25-68-7 W6M	6.7	2877	Gas		
Aquit et al Wolfs 7-33-52-15 W5M	33.3	3150	Gas	Amoco et al Steep 10-11-65-6 W6M	6.4	3378	Gas		
Aquit Rains 13-9-108-11 W6M	100	2179	Gas	Amoco et al Gold Creek 10-26-66-6 W6M	6.7	3135	Gas		
Aquit Shell Strachan 5-11-38-10 W5M	50	4270	Abandoned	Amoco et al Bald 7-14-68-7 W6M	3.3	2920	Gas		
Aquit et al Davey 3-28-34-28 W4M	31.2	1235	Gas	Amoco et al Wapiti 6-23-68-8 W6M	6.7	3131	Gas		
Aquit et al Davey 16-18-34-28 W4M	31.2	1241	Abandoned	Amoco et al Newand 10-34-65-6 W6M	6.7	3290	Gas		
Aquit Braz R 7-4-46-15 W5M	100	4017	Drilling	Amoco et al Newand 6-7-65-6 W6M	6.7	3469	Gas		
Aquit Stolberg 6-1-43-16 W5M	50	4109	Drilling	Amoco et al Steep 5-30-65-6 W6M	6.7	3472	Gas		
Aquit et al Davey 4-34-34-28 W4M	31.2	1181	Gas	Amoco et al Gold Ck 11-32-67-6 W6M	6.7	2551	Gas		
Aquit et al Davey 10-20-34-28 W4M	31.2	1244	Oil	Amoco et al Gold Ck 6-5-67-6 W6M	3.3	3083	Gas		
Aquit et al Davey 8-17-34-28 W4M	31.2	1250	Oil	Amoco et al Steep A7-28-66-7 W6M	7.5	1730	Drilling		
Aquit et al Davey 10-29-34-28 W4M	31.2	1240	Abandoned	Dome et al Poco 10-20-46-16 W5M	50	4342	Gas		
Aquit et al Edsøy 6-17-51-18 W5M	100	3593	Drilling	Dome et al Lator 6-11-62-3 W6M	9.3	2625	Drilling		
Aquit Rains 9-5-107-10 W6M	100	2050	Drilling	Gulf et al Ferrier 7-33-38-8 W5M	33.3	2295	Oil		
Unigas et al Larne 10-15-115-4 W6M	38	267	Gas	Gulf et al Ferrier 1-12-38-8 W5M	33.3	2323	Oil		
Unigas et al Virgo 6-25-114-4 W6M	33.7	235	Gas	Home et al Sinclair 7-18-73-11 W6M	18.7	2548	Gas		
Unigas et al Springco 10-27-3-22 W4M	42.1	1532	Abandoned	Home et al Stolberg 10-17-42-15 W5M	50	3330	Drilling		
Unigas et al Springco 10-7-4-21 W4M	42.1	1110	Gas	Home et al Sinclair 8-27-73-12 W6M	18.7	2594	Gas		
Unigas et al Springco 12-7-3-22 W4M	42.1	1424	Abandoned	HB et al Davey 7-26-34-28 W4M	25	1213	Abandoned		
Unigas et al Springco 4-28-3-21 W4M	42.1	1087	Gas	Mobil et al Braz R 2-28-42-12 W5M	25	3383	Abandoned		
Unigas et al Corrin 6-18-61-12 W4M	42.1	593	Gas	Sulpetro et al Elmworth 6-20-68-9 W6M	1.7	3343	Gas		
Unigas et al Tomato 5-2-73-23 W4M	31.8	624	Abandoned	Sulpetro et al Sexsmith 9-33-73-5 W6M	12.5	3253	Abandoned		
Unigas et al Amadou 11-35-73-20 W4M	30.9	611	Drilling	Anderson et al Springco 14-5-4-21 W4M	42.2	2555	Gas		
<b>British Columbia</b>									
Aquit et al Callisto 7-7-83-21 W6M	19.7	1616	Gas	Anderson et al Springco 5-30-3-22 W4M	42.2	2305	Abandoned		
Aquit et al Kiwigana D-39-G 94-0-6	70	786	Abandoned	Anderson et al Springco 2-16-3-21 W4M	42.2	2555	Gas		
Aquit et al Tatoo A-27-L 94-0-10	70	813	Abandoned	Anderson et al Springco 11-31-2-22 W4M	42.2	2447	Abandoned		
Aquit et al Tsoo Creek B-28-K 94-0-3	96.7	925	Abandoned	Oil et al Pouce Coupe 5-23-79-12 W6M	21.7	2410	Abandoned		
Aquit et al Sloane 11-17-78-18 W6M	37.5	2815	Drilling	TP Onyx et al Loon 13-33-84-11 W5M	12.5	1557	Gas		
<b>Davis Strait</b>									
Aquit et al Hekja O-71 62-20-62-45	50	4566	Gas	BVX et al LILL 94-14-70-11 W4M	25	490	Gas		
<b>Montana and North Dakota</b>									
Al-Aquit 8-155-99 RB Brown 1-8	43.7	4296	Oil	Westm et al Owlseye 15-27-58-10 W4M	28.1	664	Gas		
Al-Aquit 9-141-102 US 1-9	50	3722	Oil	Canhunder et al Grayling 7-15-67-10 W6M	1.7	3342	Gas		
Al-Aquit 19-141-100 # 1-19	12.5	3374	Abandoned	Canhunder et al Grayling 10-14-67-9 W6M	1.7	3400	Gas		
Al-Aquit 28-141-100 US 1-28	100	3392	Oil	Canhunder et al Hagland 7-30-66-8 W6M	1.7	3110	Gas		
Al-Aquit 3-150-97 Kennedy 1-3	50	3547	Abandoned	Canhunder et al Hagland 7-30-66-8 W6M	1.7	3194	Gas		
Al-Aquit 15-138-102 Teepee 1-15	100	2880	Abandoned	Canhunder et al Karr 6-33-64-1 W6M	22	2590	Gas		
Al-Aquit 33-16-57 BN 1-33	30	3322	Oil	Anadarko et al Vulcan 14-12-16-24 W4M	14.1	920	Abandoned		
Al-Aquit 8-143-100 US 1-8	25	3438	Abandoned	PEX et al Lator 12-34-62-3 W6M	9.3	2140	Gas		
Al-Aquit 6-150-100 Sanders 1-6	13.8	4267	Abandoned	Renaiss Petitm Weasel 12-27-58-19 W4M	10.5	764	Abandoned		
Al-Aquit 9-25-54 Spring Lk 1-9	20	3525	Abandoned	Passburg et al Alliance 5-40-12 W4M	25	1010	Gas		
Al-Aquit 15-25-58 Anvik 1-15	20	Drilling	Landbank et al Barrhead 11-15-60-4 W5M	50	1540	Abandoned			
<b>AQUITAINE OPERATED DEVELOPMENT WELLS</b>									
<b>Alberta</b>									
Aquit Mobil Rains 13-1-108-10 W6M	50	209	Oil	Esso Chieft et al Reilly 6-25-42-17 W5M	33.3	5490	Drilling		
Aquit Mobil Rainbow 5-31-108-7 W6M	50	445	Gas	<b>British Columbia</b>					
Aquit Mobil Rainbow 8-28BY-108-7 W6M	50	457	Gas	Home et al Sundown D-97-I 93-P-7	25	2900	Gas		
Aquit Mobil Rainbow 2-29-108-7 W6M	50	470	Gas	<b>Northwest Territories</b>					
Aquit Mobil Rainbow 9-4-109-7 W6M	50	457	Gas	Esso et al Issungnak O-61	15.1	3583	Oil		
Aquit Mobil Rainbow 14-28-108-7 W6M	50	1923	Oil	Esso Gulf et al Issungnak 2-O-61	15.1	3282	Drilling		
Aquit Mobil Rainbow 3-5-109-7 W6M	50	1916	Oil	<b>Eastern Offshore</b>					
Aquit Mobil Rainbow 7-6-109-7 W6M	50	1913	Oil	Eastcan et al Verrazano L-77	18.8	442	Abandoned		
Aquit Mobil Rainbow 8-12-110-8 W6M	50	1919	Gas	Total East et al Roberval K-92	18.8	3870	Abandoned		
Aquit et al Hanlan 7-34-46-17 W5M	75	2007	Drilling	Total East et al Bjarni O-82	18.8	2650	Suspended		
Aquit Mobil Tehze 2-27RA-108-9 W6M	50	266	Oil	Total East et al Gilbert F-53	18.8	3608	Abandoned		
Unigas Unex Sousa 7-2-113-4 W6M	86.3	266	Gas	Petrocan et al Roberval C-02	18.8	2823	Abandoned		
<b>Montana and North Dakota</b>									
Al-Aquit 24-141-101 State 4-24	25	2911	Oil	Petrocan et al Ogmund E-72	18.8	3094	Abandoned		
Al-Aquit 27-141-100 BN 1-27	100	3402	Oil	Petrocan et al N Leif I-05	18.8	423	Suspended		
Al-Aquit 7-141-100 BN 1-7	12.5	2911	Oil	Petrocan et al N Bjarni F-06	18.8	423	Abandoned		
Al-Aquit 14-141-101 US 2-14	18.7	3392	Oil	<b>Montana and North Dakota</b>					
Al-Aquit 22-141-100 US 3-22	40.6	2917	Oil	Champlin 23-149-100 McGreg 1-23	2.1	4185	Abandoned		
Al-Aquit 23-141-100 BN 1-23	55	2926	Abandoned	Champlin St 22-149-100 Rog 41-22	2.1	4278	Gas		
Al-Aquit 3-141-100 BN 1-3	25	3410	Oil	Gulf 23-150-98 Schafer State	6.2	4374	Abandoned		
Al-Aquit 15-141-100 BN 2-15A	55	3429	Oil	Gulf 27-153-104 Kermit-Heen	3.1	2987	Oil		
Al-Aquit 12-141-101 US 3-12	25	2905	Drilling	Texaco 27-151-99 Lattin 1	3.1	Drilling			
Al-Aquit 5-141-100 BN 1-5	25	66.7	Abandoned	Depco 24-155-102 Moerten 34-24	9	4154	Abandoned		
Al-Aquit 33-141-100 US 1-33	66.7	Drilling	GPE/Al-Aq 36-143-103 State 2-36	50	3741	Oil			
<b>Alaska</b>									
Arco Norton Sound Cost Well No. 1	6.2	4475	Abandoned	Mosbacher 13-29-57 Pete 1-13	21	Drilling			
Exxon Point Thompson Unit No. 4	2.5	4595	Abandoned	Terrapet 35-28-57 Sundt 2-35	22.3	3810	Oil		
				Terrapet 35-27-58 Berwick 1-3	1.6	3902	Abandoned		
				Terrapet 16-28-57 Swindl 1-16	42	Drilling			
				Hillard O&G 11-146-103 BN-1	25	Drilling			
				Tenneco 14-24-57 Dynesson 1-14	16.1	3914	Abandoned		

# LAND HOLDINGS

At 1980 December 31 (Thousands of Hectares)

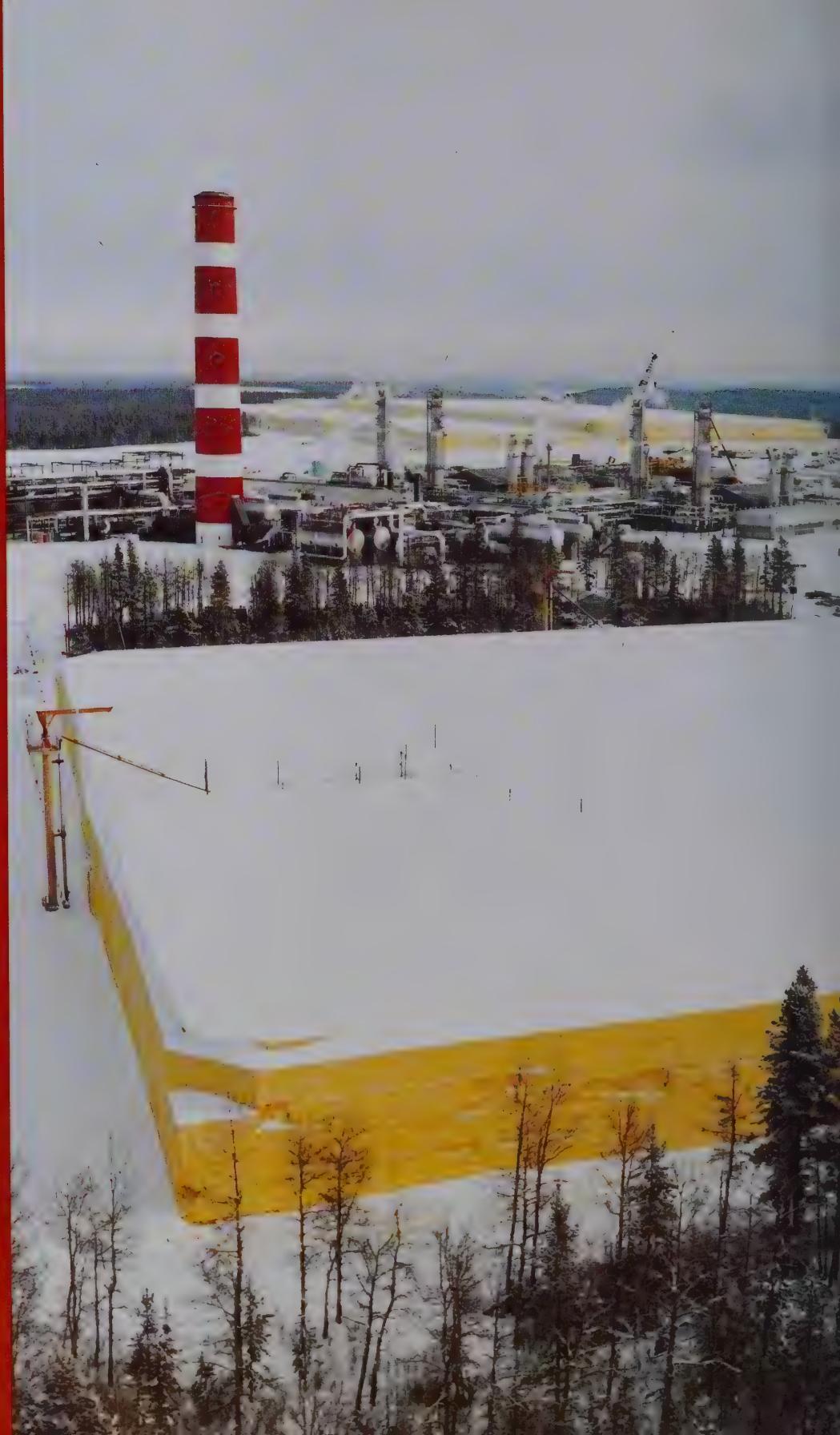
Working Interest (%)	Depth metres	Status	1980	1979	1979	1979
			Gross	Net	Gross	Net
<b>NON-OPERATED DEVELOPMENT WELLS</b>						
<b>Alberta</b>						
Dome et al Lator 10-8-62-3 W6M	9.3	2423	Oil			
Dome et al Lator 14-5-62-3 W6M	9.3	2460	Oil			
Dome et al Lator 7-7-62-3 W6M	9.3	2368	Oil			
Dome et al Lator 3-9-62-3 W6M	9.3	2480	Gas			
Dome et al Lator 16-6-62-3 W6M	9.3	2485	Gas			
Dome et al Lator 16-7-62-3 W6M	9.3	2355	Oil			
Pembina et al Medr 8-11-39-3 W5M	12.5	2185	Oil			
BVX et al Nixon 6-14-72-16 W4M	9.4	430	Gas			
BVX et al Duncan 11-22-75-15 W4M	9.4	619	Gas			
BVX et al McMillan 10-15-74-17 W4M	4.7	421	Gas			
BVX et al Duncan 11-29-74-16 W4M	9.4	483	Gas			
BVX et al Heart Lake 11-1-70-11 W4M	56.2	490	Gas			
Oil et al Boyer 6-19-102-24 W5M	56.2	428	Oil			
Canhunder et al Karr 7-20-64-1 W6M	22	2478	Drilling			
BVX et al Heart Lake 14-13-70-11 W4M	14.1	498	Gas			
<b>British Columbia</b>						
Home et al Attachie 11-20-84-22 W6M	29	1215	Gas			
<b>Montana and North Dakota</b>						
Amoco 23-149-99 Hamre 1	10.9	4435	Oil			
Champlin 23-149-100 McGregor 2 12B-23	2.1		Drilling			
Gulf-Terra 28-58 GR Crusch 1-10	8.3	3867	Oil			
Shell 29-23-60 BN 14-29	12.5	3915	Oil			
Getty 36-142-101 Mystery Creek 36-3	13.7	2911	Oil			
Chambers 12-141-101 Fed 4-12	12.5	3370	Oil			
Chambers 26-141-101 Mosser 2-26	10.1	2850	Oil			
Cenex 1-143-102 BN 5-1	12.5	2865	Abandoned			
GPE/Al-Aq 31-143-102 BN 1-31	8.9	3908	Oil			
GPE 5-146-103 BN 2-5	53.1	3429	Abandoned			
GPE 1-147-105 BN 3-1	25	2926	Oil			
Getty 1-141-101 Mystery Creek 1-16	13.7	3376	Oil			
Getty 6-141-100 Mystery Creek 86-13	6.9	2899	Oil			
Getty 1-141-101 Mystery Creek 1-3	13.7	3348	Oil			
Getty 36-142-101 Mystery Creek 36-14	13.7	2896	Oil			
Getty 1-141-101 Mystery Creek 1-1F	13.7	2911	Oil			
Mosbacher 27-153-101 H Sch 1-27	6.2	4176	Abandoned			
Mosbacher 23-153-101 E Dahl	4.7	4161	Oil			
Supron 9-142-100 1-9	12.5	3002	Abandoned			
Terrapet 3-28-58 Crusch 2-3	16.2	3871	Oil			
Terrapet 3-28-58 Crusch 3-3	12.1	3886	Oil			
Terra 18-144-103 Mosser 2-18	2.6	3906	Oil			
Terrapet 8-29-57 Rudolph 2-8	40	2766	Oil			
Coastal 23-142-101 GPE BN 1-23	25	2960	Oil			
Coastal 1-147-105 BN 4	25		Drilling			
BWAB 23-147-104 23-42X Federal	5.7	2926	Oil			
Patrick Pet 25-141-101 Mosser 1-25	10.1	2908	Oil			
Kerr McGee 4-148-102 H-Coates	12.5	4161	Oil			
<b>UNIT WELLS</b>						
In other 1980 drilling in Alberta, Aquitaine had 7.4% in ten unit oil wells and less than 1% in 15 wells; eight oil, five gas and two abandoned.						
<b>OTHER</b>						
Aquitaine also had approximately 3% in 16 shallow gas wells in the Alderson area of Alberta.						
This table does not list wells in which Aquitaine had 1% or less interest.						
<b>Oil and Gas Leases</b>						
			<b>British Columbia</b>	<b>273</b>	<b>128</b>	<b>268</b>
			<b>Alberta</b>	<b>1 134</b>	<b>381</b>	<b>1 119</b>
			<b>Saskatchewan</b>	<b>1</b>	<b>1</b>	<b>3</b>
			<b>N.W.T.</b>	<b>—</b>	<b>—</b>	<b>11</b>
			<b>Beaufort</b>	<b>14</b>	<b>4</b>	<b>14</b>
			<b>Arctic</b>	<b>29</b>	<b>15</b>	<b>29</b>
			<b>Alaska</b>	<b>2</b>	<b>1</b>	<b>4</b>
			<b>Montana</b>	<b>358</b>	<b>107</b>	<b>368</b>
			<b>Nevada</b>	<b>1</b>	<b>1</b>	<b>—</b>
			<b>North Dakota</b>	<b>132</b>	<b>46</b>	<b>100</b>
			<b>South Dakota</b>	<b>1</b>	<b>1</b>	<b>1</b>
			<b>Wyoming</b>	<b>5</b>	<b>1</b>	<b>5</b>
			<b>Alberta Oil Sands</b>	<b>25</b>	<b>15</b>	<b>—</b>
<b>Oil and Gas Reservations, Permits Licenses and Concessions</b>						
			<b>British Columbia</b>	<b>74</b>	<b>42</b>	<b>78</b>
			<b>Alberta</b>	<b>261</b>	<b>91</b>	<b>227</b>
			<b>Saskatchewan</b>	<b>13</b>	<b>6</b>	<b>13</b>
			<b>Quebec</b>	<b>9</b>	<b>2</b>	<b>2</b>
			<b>N.W.T.</b>	<b>539</b>	<b>315</b>	<b>539</b>
			<b>Beaufort</b>	<b>2 557</b>	<b>1 614</b>	<b>3 612</b>
			<b>Arctic</b>	<b>2 482</b>	<b>1 481</b>	<b>5 070</b>
			<b>Hudson Bay</b>	<b>—</b>	<b>—</b>	<b>280</b>
			<b>East Coast</b>	<b>11 163</b>	<b>2 664</b>	<b>10 484</b>
			<b>Alberta Oil Sands</b>	<b>2</b>	<b>1</b>	<b>20</b>
			<b>Total Oil and Gas</b>	<b>19 075</b>	<b>6 917</b>	<b>22 254</b>
			<b>Mineral Permits and Claims</b>	<b>310</b>	<b>87</b>	<b>271</b>
			<b>Geothermal Leases</b>	<b>14</b>	<b>11</b>	<b>16</b>
			<b>Coal</b>			
			<b>Pennsylvania</b>	<b>16</b>	<b>16</b>	<b>13</b>

## CONVERSION TABLE

The petroleum industry in Canada officially converted to the international System of Units (SI) for measuring and reporting 1979 January 01. For this reason we are pleased to include the following conversion table.

To Convert From	To	Multiply by
metres (m)	feet (well depths)	3.2808
kilometres (km)	miles (distance)	0.6214
hectares (ha)	acres (land)	2.47
cubic metres (m <sup>3</sup> )	thousand cubic feet (mcf) (gas)	0.035494
cubic metres (m <sup>3</sup> )	barrels (oil)	6.29
tonnes (t)	long tons (sulphur)	0.9842
tonnes (t)	short tons (coal)	1.10231

PRODUCTON



# PRODUCTION

## Summary

The 1980 year was marked by a high level of activity in all product lines with several notable technical achievements.

The Company maintained a constant level of oil production in Canada through infill drilling in the Rainbow field. Oil production in the Williston Basin doubled and for the first time represented a significant contribution to the cash flow of the Company.

Despite a general weak market for gas in Canada, the Company was able to increase its gas sales by 9% through improved plant efficiency and production of new reserves from Stolberg.

Taking advantage of a strong market for sulphur, the Company increased its sulphur sales volume by 65%. Remelted sulphur from inventories was added to current production to achieve record sales of 1 181 000 tonnes before royalty.

Company operated drilling was up substantially on a footage basis with a major concentration in Alberta and northwestern United States.

As a result of exploration and development drilling, the Company increased its reserves of gas in Canada by 10%, totally replaced the sulphur sales of the year and increased by 100% its reserves of oil in the United States. Oil reserves in Canada decreased by 12%.

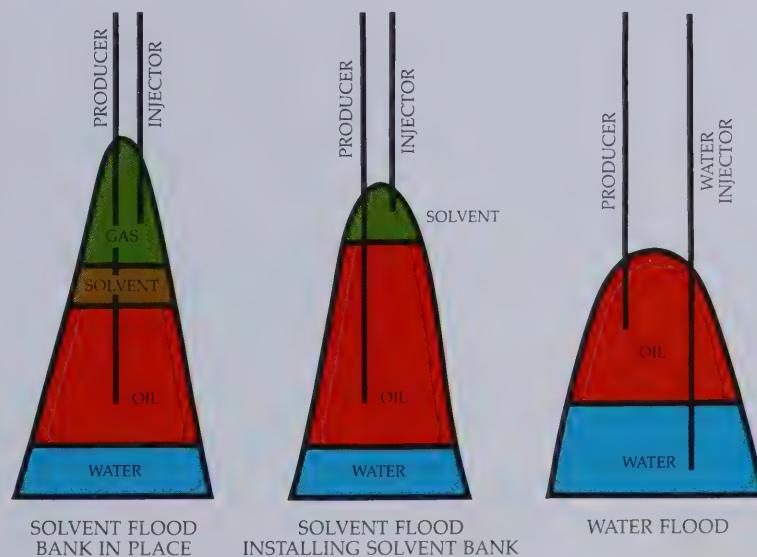
Production expenses were up 17% in 1980 compared with an 8% increase from 1978 to 1979. Operating costs of the Stolberg pipeline and production facilities, which went into operation during the year, increased. United States producing operations and Windfall Profits Tax, together with higher sulphur handling costs contributed to the 1980 increase.

Coal operations improved substantially through record sales volumes, higher prices and reduced unit costs.

## Oil and Gas Liquids

As may be seen in the following table the Rainbow Lake field, where the company produces from 20 pools, contributes to over 92% of Aquitaine's oil and gas liquids production. Enhanced recovery schemes continue to play a large role in this field where the Company has already initiated six hydrocarbon miscible floods, and eight waterfloods.

Under these existing miscible schemes Aquitaine continues to receive royalty relief in the amount of approximately \$9 million for 1980. A continued program of infill drilling almost completely offset the natural decline of the Rainbow Keg River reservoirs. Further infill drilling is extremely questionable at present, however, as a result of the overlap of the National Energy Program Petroleum and Natural Gas Tax with existing provincial royalties which makes drilling some wells uneconomic.



## ENHANCED RECOVERY SCHEMES

Aquitaine's Ram River plant located in Alberta's foothills has the largest stockpile of sulphur in the world. The block in the foreground contains half a million tonnes, and the larger one in the background five million tonnes.

During the year Aquitaine initiated studies to evaluate the potential of further enhanced recovery schemes in the Rainbow field. These programs could involve the further use of gas liquids, or could utilize more innovative schemes such as carbon dioxide and nitrogen. The first result of this study program was the design of an additional hydrocarbon miscible flood for a portion of a pool which is currently under waterflood. The project is pending final assessment of the technical risk compared with incentives offered by the provincial and federal governments.

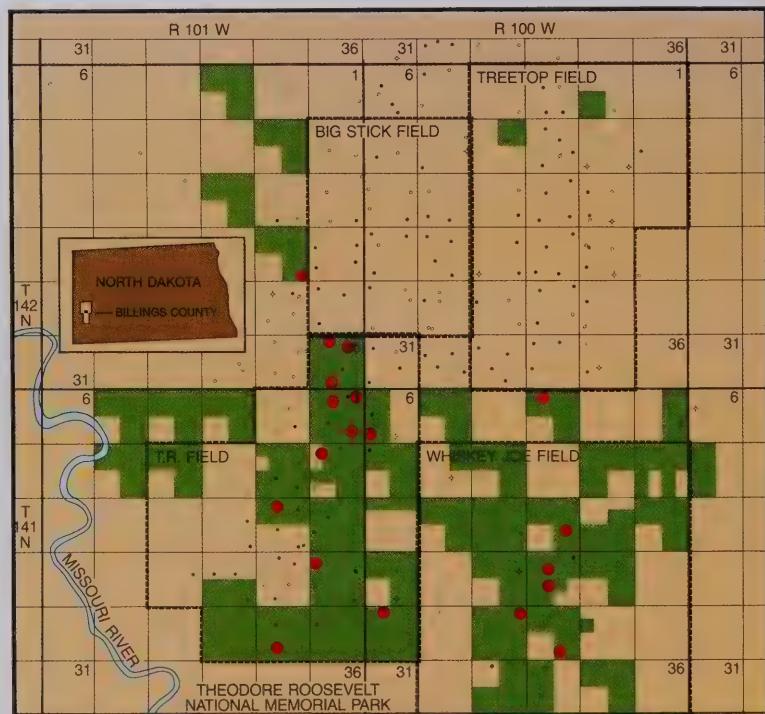
Aquitaine maintained an active position in the United States and was able to increase production by 100% over 1979 in Montana and North Dakota primarily in the Whiskey Joe and T.R. fields. The reservoirs discovered in this area since 1978 are currently under review to ensure optimum depletion schemes including the implementation of enhanced recovery where applicable.

## OIL AND GAS LIQUIDS SALES VOLUMES AND PRICES

	1980	1979		
	Thousands of Cubic Metres	Average Sales price	Thousands of Cubic Metres	Average Sales Price
Rainbow Lake				
Before Royalty	1 670	\$ 97.45	1 703	\$ 82.68
After Royalty	945		948	
Other Canada				
Before Royalty	85	\$ 95.23	94	\$ 79.83
After Royalty	61		68	
United States				
Before Royalty	67	\$254.53	35	\$136.10
After Royalty	56		29	

## Heavy Oil

The Company completed its heavy oil strategic studies during the year which have resulted in an exploration plan for Saskatchewan. Aquitaine will undertake further opportunities in this field as they become available.



CENTRAL BILLINGS COUNTY, NORTH DAKOTA

■ AQUITAINE INTEREST

DRILLING WELL LOCATION

OIL WELL

GAS WELL

1980 WELLS - RED

## Gas

Gas production increased by 9% over 1979. Although the industry was under severe market restrictions throughout the year, the Company was able to substantially increase sales primarily through the Ram River plant which accounts for 86% of Aquitaine gas revenues. The Company was able through several activities to keep the plant operating at full capacity. The 1978 installation of the \$8 million sour gas pipeline to deliver gas to Ram River from Stolberg, Nordegg West and Saunders fields was replaced in 1979 due to pipe deficiency and was operational by May 1980. Aquitaine will process 680 million cubic metres per year from this project.

In addition to Stolberg the Company completed compressor modifications for the Strachan pool and the installation of three new compressors at a cost of \$16 million to increase Ricinus West deliverability.

Expansion of facilities to process 5.6 million cubic metres per day of Limestone field gas owned by another company was also completed by year end at a cost of \$22 million. This facility, together with contract processing the company performs for other operators should provide a revenue of \$18 million in 1981 compared with \$10.6 million in 1980.

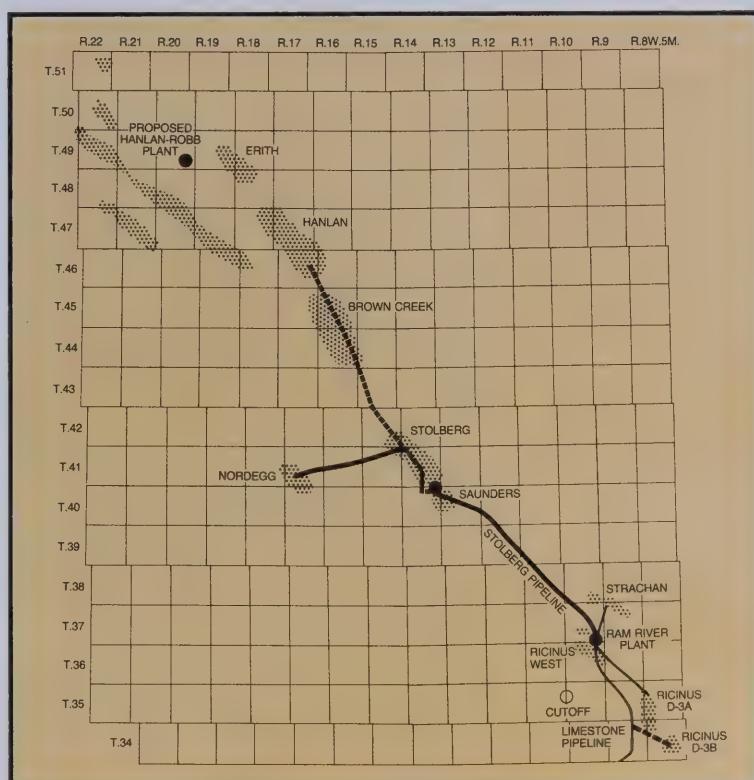
Designs of new pipeline and compressor installations to deliver Aquitaine gas reserves in the Ram River area were also prepared during 1980. Foremost among these potential projects is the connection to the Ram River plant of Hanlan reserves. Hanlan is located 140 kilometres northwest of Ram River and has estimated Company reserves of 4 billion cubic metres before royalty.

Aquitaine is at the present time contemplating either delivering these reserves to our share of the prospective Hanlan-Robb plant or transporting them via pipeline to the existing Ram River plant. Evaluation of the best development scheme for these reserves will continue together with the aggressive delineation and exploration drilling program being conducted in the region.

To the southwest of Ram River lie the Ricinus B and Cutoff gas pools which will be tied in to the Ram River plant during the 1981-1982 winter season. These reserves will be used to help offset the decline of reservoirs currently serving the plant.

Other projects at Ram River include the completion of a carbon dioxide extraction study demonstrating that approximately .75 million cubic metres per day could be extracted from the acid gas stream to be used for enhanced oil recovery in the area.

Although Ram River production dominated Aquitaine gas sales, several new areas were either completed or commenced development during 1980. The Company participated in a new sweet gas processing facility in Gold Creek and finalized design of the Sousa-Hay Lake 48-kilometre gas gathering system in northern Alberta.



RAM RIVER AREA DEVELOPMENTS

EXISTING PIPELINE  
PROPOSED PIPELINE

Rainbow Lake gas reserves, although sizeable, are not under sales contract since this gas is presently fully utilized in pressure maintenance for the Rainbow miscible flood schemes. The proved reserves before royalty, of 3.8 billion cubic metres could be made available for sale if a substitute were found to maintain pressure for existing and future enhanced recovery schemes. To this end, the Company initiated studies to manufacture nitrogen at Rainbow Lake.

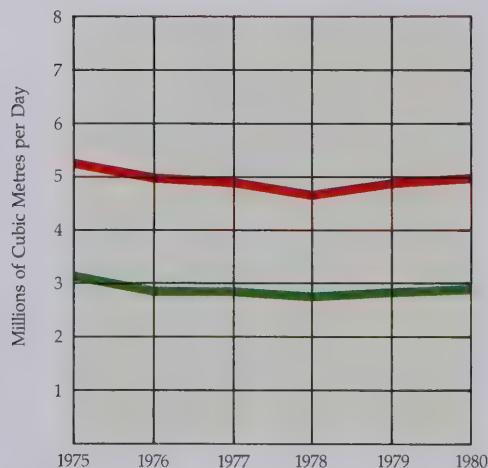
#### GAS SALES VOLUMES AND PRICES

	1980		1979	
	Millions of Cubic Metres	Average Sales Price	Millions of Cubic Metres	Average Sales Price
<b>Ram River</b>				
Before Royalty	1 136	\$ 88.67	1 017	\$ 62.42
After Royalty	660		637	
<b>Other Canada</b>				
Before Royalty	185	\$ 83.53	197	\$ 59.73
After Royalty	123		131	

#### Sulphur

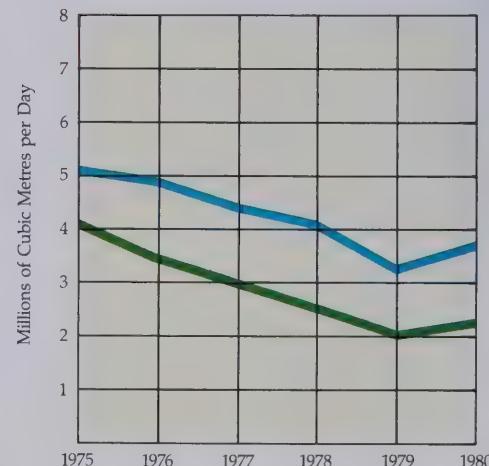
Sales volumes of sulphur continued to set Company records in 1980 with an increase of 65% over 1979 due to increased gas production and to the sulphur block remelt operation. Total sulphur sales, before royalty, were 1 181 000 tonnes for the year compared with 715 000 tonnes in 1979.

To ensure a sound environmental operation, Aquitaine commenced design and construction of melting and handling facilities to minimize dust emission at the plant and during dock loading in Vancouver. In early 1980 the rapid load system and concrete storage projects were operational at a cost of \$5.1 million and by year end the Company had installed one in-situ melter and ordered four additional units which should be in operation by mid 1981. A decision, made early in 1980, to proceed with additional sulphur forming capability to accommodate increased production from plant owners and users, resulted in the start



#### OIL AND GAS LIQUIDS SALES

Gross Sales Net Sales



#### GAS SALES

Gross Sales Net Sales

of construction of a 3 000 tonne per day prilling facility. With the completion of these projects the Ram River plant will be the largest, best equipped sulphur facility in Canada.

### SULPHUR SALES VOLUMES AND PRICES

	1980	1979	
Thousands of Tonnes	Average Sales Price	Thousands of Tonnes	Average Sales Price
Before Royalty	1 181 \$ 76.41	715 \$ 35.07	
After Royalty	997	616	

### Drilling Operations

The year was one of extremely high activity for drilling operations with an increase of 17% for footage drilled over that drilled in 1979.

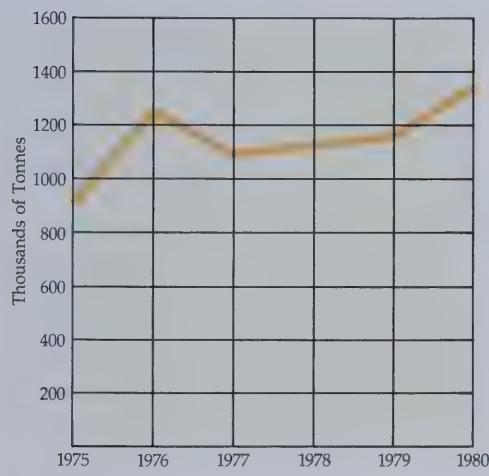
In addition, the Hekja well offshore Baffin Island was completed in October. The structure was successfully tested from the

dynamically positioned drillship, Ben Ocean Lancer. The combination of water depth and hostile environment made this well unique.

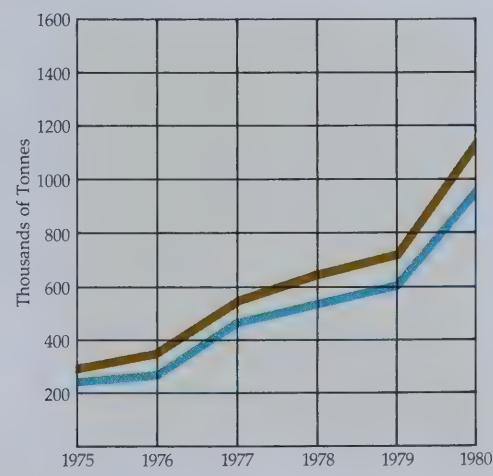
### Coal

Coal shipments for 1980 reached a record high of 1 364 000 tonnes, an increase of 17% over 1979 and 9% over the previous high established in 1976.

This increase was due primarily to improved domestic sales of high quality steam coal and the successful negotiation of several export contracts. Total export shipments tripled from 95 000 tonnes in 1979 to 307 000 tonnes in 1980: for the first time, Aquitaine Pennsylvania exported steam coal directly to France and metallurgical coal to Japan. Due to the continuous over capacity in the United States, prices remained unsatisfactory and increased by only 9% in 1980 — less than inflation.



### COAL SALES



### SULPHUR SALES

Gross Sales   Net Sales

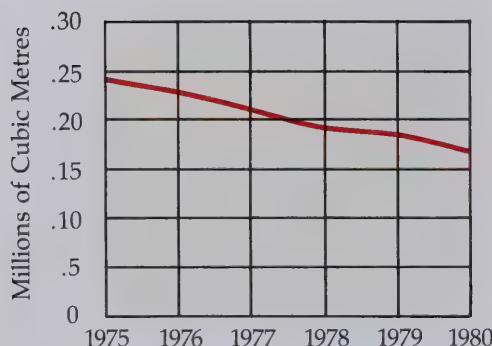
Despite the general inflationary pressures on wages, cost of fuel, explosives and other operating expenses, operating costs for 1980 on a per ton basis were 5% lower than in 1979 due to continued improvement in productivity. The improvement of the surface mining performance was primarily due to increased efficiency of the 32 cubic yard dragline that was placed in service in the middle of 1979. The underground mines also experienced an improvement in operating performance due to increased productivity.

The combination of increased shipments, higher prices and lower operating costs resulted in a substantial improvement of the cash flow from coal operations.

Capital expenditures were kept at the minimum required for the replacement of mining equipment.

However, despite these significant improvements, the results of the coal operation remain unsatisfactory. The present dramatic congestion of the port facilities does not allow the coal companies in eastern United States to take advantage in the immediate future of the strong demand for steam coal in the European market. The results in 1981 could also be adversely affected by a possible strike of the United Mine Workers.

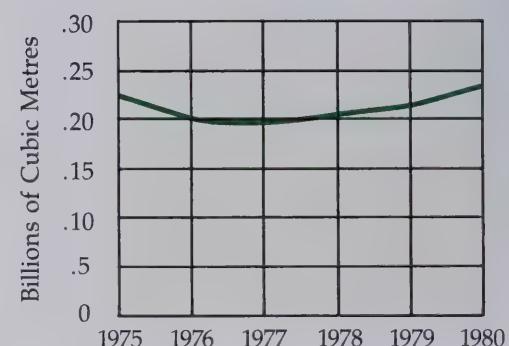
In the medium term, the Company remains confident that, with the new port facilities now being built, or planned, additional exports will contribute to reach a balance between supply and demand. Prices will then have to increase substantially to justify the development of new production facilities. In addition, the Company is well positioned to serve the high quality steam coal domestic market which should grow at a faster rate in



## OIL CANADA



Proved Reserves



## GAS CANADA



Proved Reserves

the coming years and bring higher prices. Capital expenditures in 1981 will be mainly devoted to the improvement of shipping facilities at the mine to serve the high quality steam coal market and to the preparation of plans for future additional production capacity.

#### COAL SHIPMENTS, SALES PRICES AND PRODUCTION EXPENSES

	1980	1979	% change
Shipment (tonnes)	1 364 000	1 165 000	+ 17
Sales prices — (US\$/tonne)	33.21	30.34	+ 9
Production expenses — (US\$/tonne)	28.96	30.46	- 5

#### Reserves

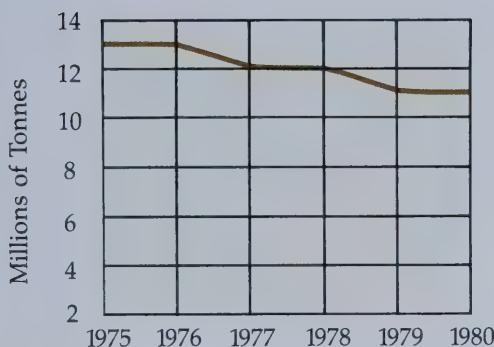
Gross proven reserves at 1980 December 31, as determined by the Company's geological and engineering staff, are summarized in the accompanying table. During the year, oil reserves in Canada dropped by 12% due to

the decline of the Rainbow Lake field, while oil reserves in the United States doubled. Gas reserves were up 10%, due mainly to the Brown Creek and Hanlan discoveries. Sulphur reserves were up slightly as additional discoveries more than replaced the year's production.

#### GROSS PROVEN RESERVES

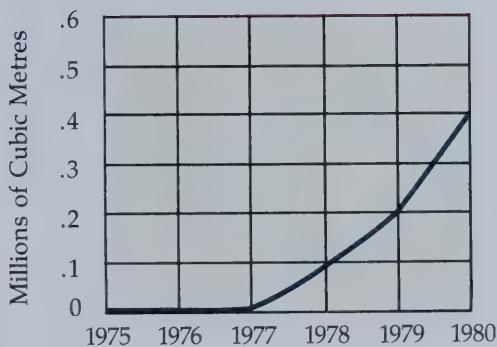
	Oil and Gas Liquids Canada	Gas Canada	Sulphur Canada	Oil and Gas Liquids U.S.A.
	millions of cubic metres	billions of cubic metres	millions of tonnes	millions of cubic metres
Proven reserves at 1980-01-01	18.5	21.4	10.6	.2
Revisions	(.5)	(.7)	1.4	—
Discoveries/extensions	—	4.2	—	.3
Production	(1.7)	(1.3)	(1.2)	(.1)
Proven reserves at 1980-12-31	16.3	23.6	10.8*	.4

\*This figure includes 3.8 million tonnes in the Ram River block inventory.



#### SULPHUR CANADA

Proved Reserves



#### OIL UNITED STATES

Proved Reserves

# CORPORATE AFFAIRS



# CORPORATE AFFAIRS

## The Environment

Environmental protection and conservation programs are an integral part of all the activities that Aquitaine undertakes.

In the Davis Strait, research programs and environmental monitoring received high priority to ensure that the offshore drilling program was carried out in the safest manner possible. Baffin Island communities continued to receive socio-economic benefits from our operations in the form of employment, training and increased local business with a total of 32 Baffin Island residents being employed during the 1980 summer. An Inuit advisory committee worked closely with Aquitaine to ensure local communities a voice in the Company's activities.

At the Ram River gas processing plant the rapid growth in the volume of sulphur sales necessitated improved methods of handling. Improvement of environmental monitoring practices in 1980 will allow for greater control of sulphur emissions over time. The reclamation of drill sites, seismic lines and of the Stolberg sour gas pipeline route through planting and seeding were carried out during the year.

Programs were undertaken with provincial authorities to ensure that water quality was maintained at the uranium mining exploratory drilling site in Nova Scotia.

Photos reading left to right:

*Joe Akeeshoo and Egetsiaq Peters were among the Baffin Island residents who worked on the Ben Ocean Lancer during the summer drilling program.*

*Aquitaine employees are entertained at a Christmas noon-hour concert by the Mount Royal College Children's Choir, as part of a wintertime lunch hour program arranged by the corporate relations department.*

*Seven employees received their 15-year long service awards from Bernard Isautier, President (5th from right) and Michael Hriskevich, Senior Vice-President (3rd from left) at a cocktail reception.*

*A donation from Aquitaine provided Brad Goodman, a student at the Alberta School for the Deaf, with a tele typewriter, which allows him to use the telephone and broaden his means of communicating.*

*A fifth grade student who attended the Aquitaine sponsored matinee for schools of the Southern Alberta Opera Association's production of The Mikado responded with this graphic expression of his thanks.*

## Human Relations

We are proud of our employees' achievements and their service to the Company. It is gratifying that of 538 people on our Canadian staff, over 100 have been with the company ten years or longer. This number includes those who came from Banff Oil and Elf Exploration through mergers. Of the 473 people with Aquitaine Pennsylvania, Inc. (API), 86 have been with the group 10 or more years.

The Company continues to review on an ongoing basis salary and benefit plans to keep them in line with changing conditions and competitive with other companies in the petroleum industry. During the year the stock bonus plan for key employees in professional and technical positions was extended to include more employees.

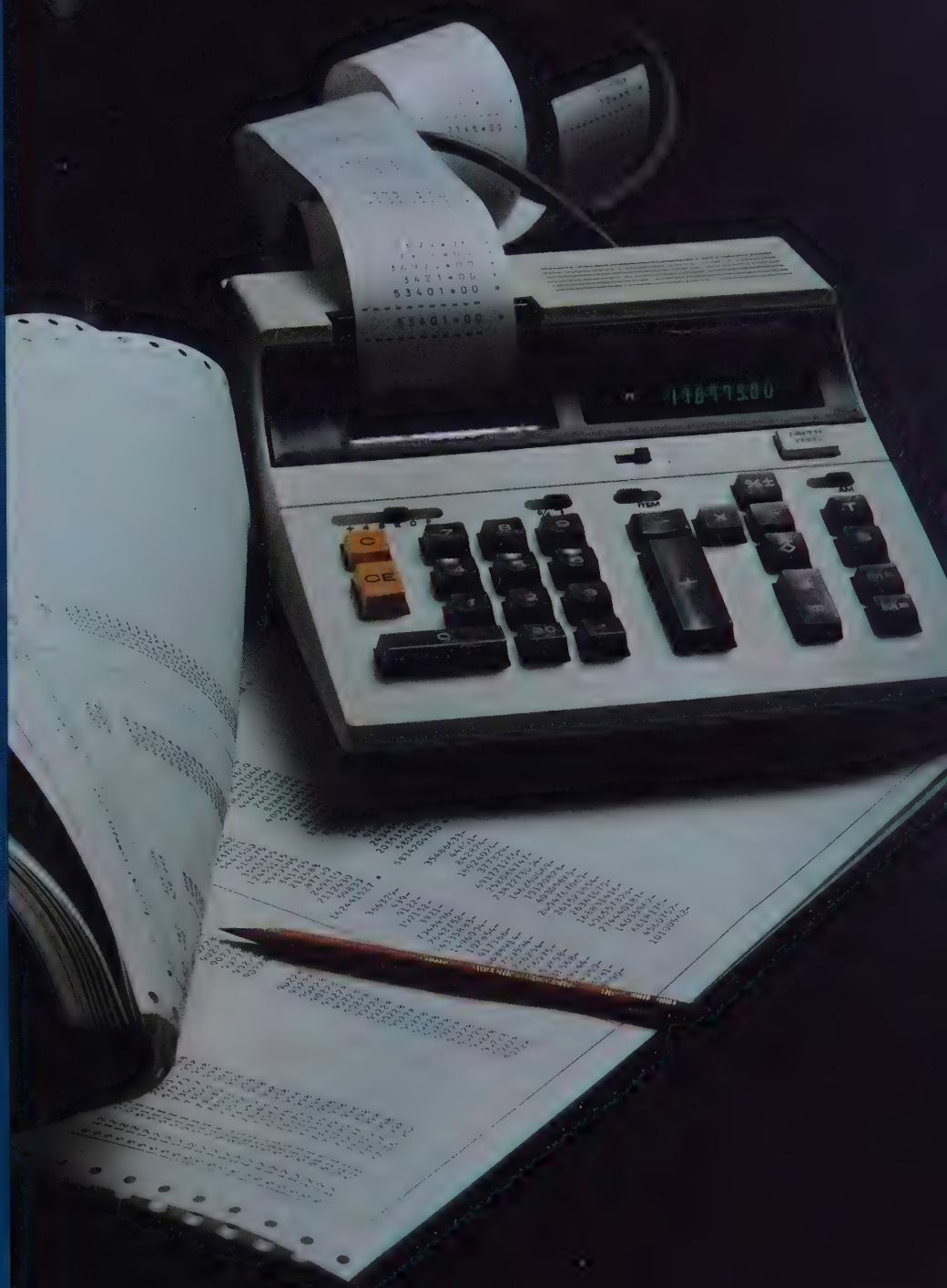
Due to the Company's growth during the year, the Canadian staff has increased to 538 from 472; the Denver staff has grown from 14 to 34 and API staff has increased by ten to 473. The total cost of salaries, wages and benefits for all employees in 1980 was \$18.9 million compared with \$14.6 million in 1979.

Aquitaine employees continued to support and participate in the safety programs being conducted and have established an enviable record through the years. In 1980 only one minor lost-time accident was recorded in what was otherwise a good year in safety, with the Ram River plant receiving two safety awards.

## Community Relations

As a business enterprise profits are essential, but so is the quality of life and the environment in which it operates. Through our donations program we are able to support many activities in many different areas of society. Over the years the Company has developed a strong program in support of the arts. While we support many organizations, one of our largest contributions in the past year was for the new Calgary Centre for the Performing Arts. We also support many art groups and encourage our employees to attend opera performances through subsidized ticket sales. Our art collection continues to grow and provides interest to our working areas. Aquitaine also supports youth groups in many walks of life as the youth of today are the citizens and employees of tomorrow.

# FINANCIAL



# FINANCIAL

## Management's Discussion and Analysis of Financial Condition and Results of Operations

Net earnings for 1980 were \$65,057,000 or \$3.02 per share compared with \$32,617,000 (\$1.51 per share) in 1979 and \$31,218,000 (\$1.27 per share) in 1978. Cash flow from operations was \$178,021,000 or \$8.26 per share compared to \$115,668,000 (\$5.37 per share) last year and \$87,419,000 (\$4.06 per share) in 1978.

The accompanying consolidated financial statements detail the Company's financial position as at 1980 and 1979 December 31 and the results of operations and changes in financial position for the three years ended 1980 December 31. The reader is also referred to the Ten Year Summary on pages 50 and 51 for selected financial and operating data.

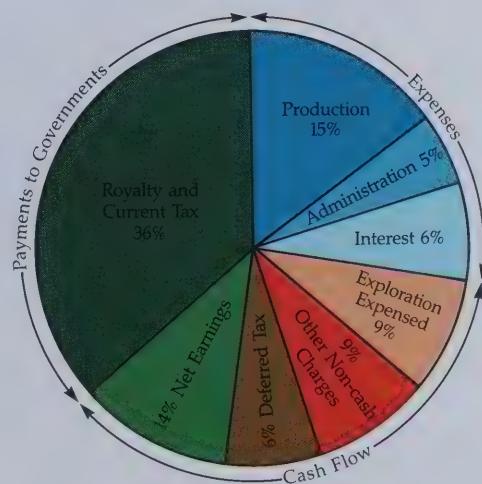
The following are comments on the financial position, changes therein and the results of operations. Management cautions that the historical data presented herein may not be indicative of future results because of uncertainties such as demand for the Company's production, government legislation and regulations, and economic conditions.

Total revenues were \$337,640,000 in 1980 compared with \$224,124,000 and \$195,094,000 in 1979 and 1978 respectively. The increases in revenues result primarily from price increases received for oil, gas and sulphur together with higher sulphur sales volumes. Sulphur revenues accounted for \$76,338,000, \$22,301,000 and \$13,628,000 of total revenues in each of those years. Further detailed comments on revenues and production expenses relating to oil, gas, sulphur and coal operations are found in the Production Section of this report starting on page 17.

The revenues from investments and other sources increased in 1980 and 1979 due to income from investment of temporarily surplus funds and, in 1980 higher rentals from two office buildings, following completion of the new building, Selkirk House, in Calgary.

Administrative expenses have increased over the three years due to the additional staff and administrative facilities necessitated by the expanded oil and gas exploration and development program and to salary increases to employees. In 1980, administrative expenses also included additional building operating expenses following completion of the Company's second office building.

Interest expense in 1980 was \$27,521,000 compared with \$18,113,000 in 1979 and \$7,525,000 in 1978 reflecting firstly the increase in long term debt incurred to finance, in part, the expanded exploration and development program undertaken during those years and, secondly significantly higher interest rates.



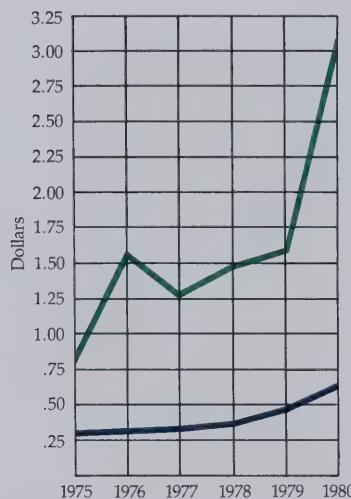
DISTRIBUTION OF INCOME

Exploration expenses includes non-producing property rentals and geological and geophysical expenses which have shown regular increases over the three years as exploration efforts increased, and the cost of unsuccessful exploratory drilling which fluctuates under the successful efforts method of accounting followed by the Company.

The provisions for depletion, depreciation and impairment of properties were \$42,156,000 in 1980, double those of 1979 and a 131% increase over 1978. The large increase in 1980 results from provisions made to reduce the carrying values of unproven properties, principally in frontier areas, to what management believes are more realistic values in light of best available information and depletion and depreciation of capital costs relating to the processing of gas at Ram River for others, the Stolberg pipeline and production facilities, and greater U.S. operations.

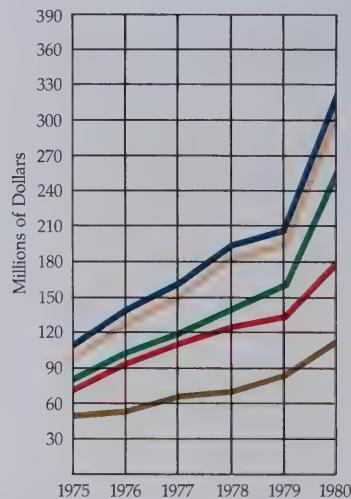
Income tax expense was \$64,577,000, 50% of pre-tax earnings compared with \$23,571,000, 42% of pre-tax earnings in 1979 and \$38,378,000, 55% of pre-tax earnings in 1978. The higher effective rate in 1980 is due to the expiry of frontier exploration allowance in March 1980. This allowance was a major factor in reducing 1979 taxes. Also contributing to the lower effective rate in 1979 was a prior period adjustment without which the effective rate would have been approximately 47%.

Capital and exploration expenditures totalled \$178,512,000 in 1980, up 22% over the 1979 total of \$146,217,000 and 83% over 1978 expenditures of \$97,666,000 and reflect the Company's aggressive exploration program. The results of the program have been discoveries of additional gas and sulphur reserves in Canada and oil reserves in the United States, more fully explained elsewhere in this report. In addition to the expenditures



**NET EARNINGS PER SHARE**

Net Earnings  
 Dividends



**NET SALES**

Sulphur Handling and Gas Processing Income  
 Coal  
 Natural Gas  
 Oil and Gas Liquids  
 Sulphur

above relating to 1979, all of the shares of Universal Gas Co. Ltd. were acquired for \$23,159,000. The addition of the negative working capital of that company at acquisition brought the total outlay to \$38,309,000. This purchase added 1.3 billion cubic metres of gas to the Company's reserves. On 1980 December 31, the Company purchased all of the shares of Elf Hydrocarbures du Québec Ltée. from Société Nationale Elf Aquitaine, the Company's parent for \$935,000. This subsidiary is engaged in marketing refined petroleum products, principally domestic heating fuels, in the Province of Quebec. The Company expects to dispose of most of the assets of this company in the near future at a profit.

Working capital at 1980 December 31 was \$91,344,000 as against \$27,874,000 at the same date last year and \$30,899,000 at the end of 1978. The increase at the end of 1980 resulted primarily from the proceeds of long term

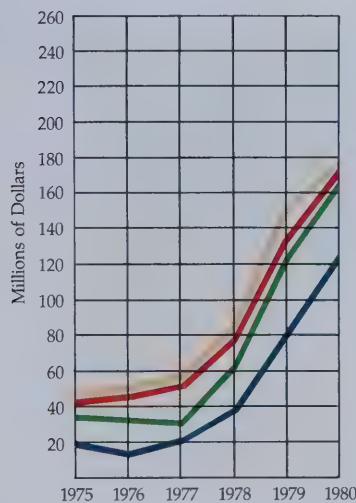
borrowings for a new office building to be constructed in Denver, Colorado which are temporarily invested in short term investments.

At the end of 1980, the total debt of the Company was \$238,373,000 compared to shareholders' equity of \$304,907,000. The substantial increase in capital and exploration expenditures and the cost of acquired companies was achieved while maintaining the strong financial position of the Company. Approximately 75% of these expenditures over the past three year period were financed internally. The Company has no off balance sheet financing and has an asset value substantially greater than book value.

In June 1980, the Company paid a dividend of 60¢ a share, a 28% increase over the 1979 dividend of 47¢ and 54% over the 39¢ paid in 1978.

The outlook for the future, in particular the implications of the Canadian government's National Energy Program, and the effect on the Company are commented on in the President's Report on page 3, to which the reader is referred.

This year's annual report includes expanded information relating to the Company's reserves and, in the case of oil and gas liquids, gas and sulphur reserves, the future net revenues expected therefrom. This information is presented immediately following the financial statements.

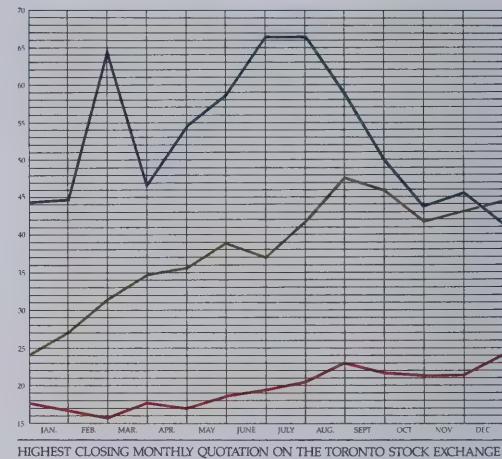


### CAPITAL & EXPLORATION EXPENDITURES

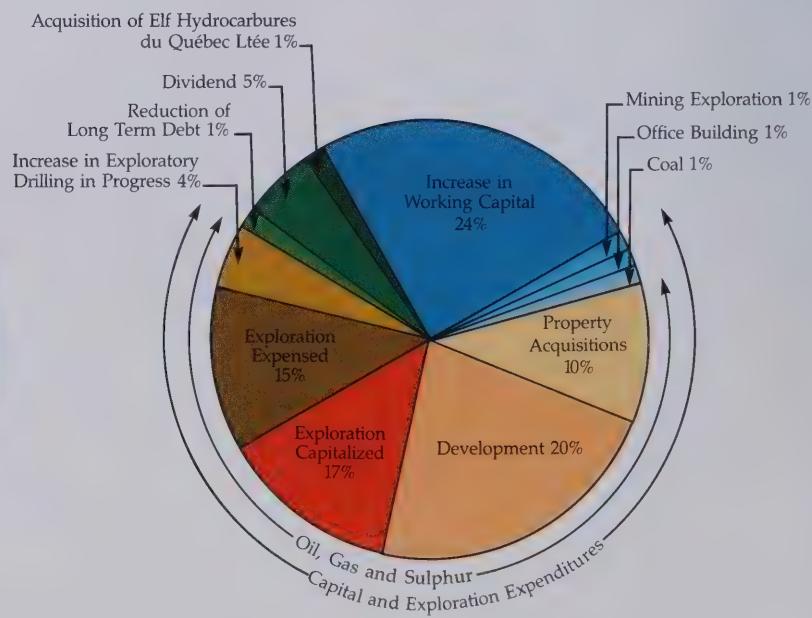
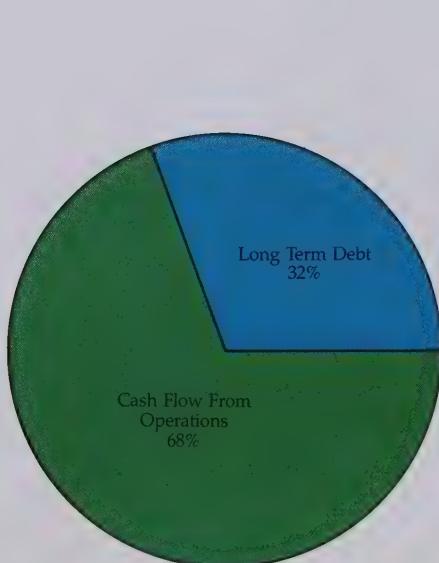
-  Coal
-  Other
-  Exploration Expensed
-  Exploration and Development Capitalized

Information prepared under the concept of Reserve Recognition Accounting (RRA) is also presented for the first time in this year's annual report and appears, together with an explanation of the concept, the results prepared thereunder and Management's comments thereon commencing on page 47.

The Company is adversely affected by inflation as is everyone. Production and administrative expenses and capital and exploration expenditures have risen due to its effect, particularly so in oil, gas and sulphur operations where the Company believes cost increases have exceeded general price level changes. Such cost increases are included in expenses charged against earnings and for expenditures capitalized are reflected through higher charges against earnings for depletion and depreciation. Earnings are therefore depressed. Even in the absence of inflation capital and exploration expenditures are



increasing as the search for reserves is intensified and is carried to frontier areas and high cost techniques are applied to locate, develop and produce reserves.



## Information on Shares

	1980	1979	1978
Shares outstanding at year end	21 565 000	21 558 000	21 558 000
Number of shareholders at year end	5 515	5 773	6 100
Percentage ownership at year end			
SNEA	74.8	74.8	74.8
Canadian	16.8	15	21.1
U.S. and other foreign	8.4	10.2	4
Shareholder's equity	\$304,907,000	\$252,302,000	\$229,817,000
Earnings per share	\$3.02	\$1.51	\$1.44
Dividend per share (paid annually)	60¢	47¢	39¢

## Trading Information

### Toronto Stock Exchange

Number of shares traded	3 577 224	3 746 477	1 325 423
Price at year end	\$41 1/4	\$40 3/4	\$20 3/4

### Price Ranges (High-Low)

First quarter	\$66 3/4-37 1/2	32 1/2-20 1/2	17 3/8-14 3/4
Second quarter	68 -45 3/4	39 1/2-27	19 7/8-15 1/2
Third quarter	70 -40	48 -32 1/4	28 3/4-17
Fourth quarter	58 -35 1/8	46 1/2-32 1/2	21 7/8-18 1/4

### American Stock Exchange

Number of shares traded	5 412 900	4 282 900	427 900
Price at year end	US\$ 34 1/8	34 1/2	17 1/8

### Price Ranges (High-Low)

First quarter	US \$58 -31 1/2	28 -17 1/8	15 7/8-13 1/2
Second quarter	59 3/8-38 1/4	34 -24	15 1/2-13 5/8
Third quarter	61 3/8-41	41 -27 5/8	20 7/8-14 7/8
Fourth quarter	50 3/8-29 1/8	40 5/8-27 3/4	18 3/4-15 3/8

## Dividend Restriction

The Company is subject to certain contractual restrictions on the payment of dividends. In this regard, please refer to Note 10 to the consolidated financial statements.

## Taxation on Dividends Payable to United States Security Holders

Dividends paid by the Company to non-residents of Canada are subject to a withholding tax at the rate of 25%. The Canada-U.S. Tax Convention reduces this rate to 15% and because the Company has a "degree of Canadian Ownership" as defined in the Canadian Income Tax Act, the rate is further reduced to 10%. The gross amount of dividends paid on the Company's common shares (including the amount of any Canadian income tax withheld) will be subject to U.S. federal income tax upon

receipt by persons who are subject to U.S. federal income tax on dividends, including citizens or residents of the United States and U.S. corporations, estates or trusts. In computing their U.S. federal tax liability, such recipients will generally be entitled, subject to certain limitations, to either a credit or a deduction with respect to Canadian income taxes withheld from such dividends. (Under certain limited circumstances, non-resident aliens of the United States and non-U.S. corporations may also be subject to U.S. income tax, and may be entitled to a credit or a deduction, as the case may be.) As dividends from a non-U.S. corporation, these dividends will not qualify for the limited exclusion for dividends and interest available to individuals or the 85 percent dividends received deduction available to corporations.

# MANAGEMENT'S REPORT

The accompanying consolidated financial statements of the Company were prepared by the Management in accordance with accounting principles generally accepted in Canada consistently applied. The significant accounting principles followed are described in the accompanying Summary of Significant Accounting Principles.

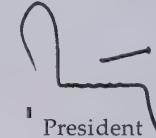
The Management is responsible for the integrity and objectivity of the financial statements. In the preparation of these statements estimates are sometimes necessary when transactions affecting the current accounting period cannot be finalized with certainty until future periods. Management believes such estimates reflect careful judgments and have been properly prepared.

Management has established systems of internal control which are designed to assure reliable accounting records and protect the Company's assets. The Company's auditors, appointed by the shareholders, provide an independent review of our internal control system and perform such other auditing procedures as they deem necessary for the purpose of expressing their opinion on the financial statements. The Audit Committee of the Board of Directors meets with the Auditors with and without Management in attendance to review the financial statements, the system of internal control, the quality of financial reporting and other matters and reports to the Board of Directors.

In Management's opinion the financial statements fairly present the financial position of the Company, the results of its operations and the changes in its financial position.

The Management recognizes its responsibility for conducting the Company's affairs in compliance with established financial standards and applicable laws, and maintenance of proper standards of conduct in its activities

Calgary, Alberta  
1981 February 23



President

## AUDITORS' REPORT

To Shareholders  
Aquitaine Company of Canada Ltd.

We have examined the consolidated balance sheet of Aquitaine Company of Canada Ltd. as at 1980 and 1979 December 31 and the consolidated statements of net earnings, retained earnings and changes in financial position for the three years ended 1980 December 31. Our examination was made in accordance with generally accepted auditing standards, and accordingly included such tests and other procedures as we considered necessary in the circumstances.

In our opinion, these consolidated financial statements present fairly the financial position of the Company as at 1980 and 1979 December 31 and the results of its operations and the changes in its financial position for the three years ended 1980 December 31 in accordance with generally accepted accounting principles applied on a consistent basis.

Calgary, Alberta  
1981 February 23

TOUCHE ROSS & CO.  
Chartered Accountants

## SUMMARY OF SIGNIFICANT ACCOUNTING PRINCIPLES

The Company follows accounting principles generally accepted in Canada. The following significant principles are presented to assist the reader in evaluating the Company's financial statements and together with the following notes should be considered an integral part of the financial statements. In those instances when more than one generally accepted accounting principle can be applied, the Company has adopted the principle which it believes most appropriately reflects its financial position and results of operations.

### PRINCIPLES OF CONSOLIDATION

The consolidated financial statements include the accounts of Aquitaine Company of Canada Ltd. and its subsidiaries (the Company) except for the wholly owned subsidiary providing certain insurance coverage to the Company which, because consolidation is not considered to be appropriate presentation, is accounted for on the equity method and is

included in investments and other assets. The Company's 33 $\frac{1}{3}$  % interest in Rainbow Pipe Line Company Ltd. is also accounted for by the equity method. All inter-company accounts and transactions have been eliminated in consolidation.

#### FOREIGN EXCHANGE

Accounts in foreign currencies have been converted to Canadian currency on the following bases:

- i) current assets and current liabilities at the exchange rate on December 31;
- ii) properties, plant and equipment, exploratory drilling in progress, investments and other assets, long term debt, revenues and expenses at the exchange rate in effect on the date of the transaction; and
- iii) accumulated provisions for depletion, depreciation, impairment of properties and deferred income taxes and current provisions therefor against earnings on the same basis as the related assets.

Exchange gains or losses are included in determining net earnings for the year in which realized.

#### INVENTORIES

Inventories include materials, supplies, coal and refined petroleum products and are stated at the lower of cost or replacement cost.

#### PROPERTIES, PLANT AND EQUIPMENT

The Company follows the successful efforts method of accounting for oil, gas and sulphur properties. Under this method exploration expenses including property rentals and unproductive exploratory drilling are charged against earnings as incurred. The acquisition costs of unproved properties are capitalized and, based on periodic assessments, appropriate provisions for impairment are charged to earnings. The cost of producing properties including property acquisitions, productive drilling (including drilling pending a determination of whether proved reserves have been discovered), development dry holes and plant and equipment are capitalized and depletion and depreciation is provided for each field using the unit of production method based on proved reserves of oil and gas as estimated by the Company.

The cost of exploration and development of coal properties is capitalized with depletion being provided for each mine by the unit of production method based on recoverable reserves of coal as estimated by the Company.

The costs of prospective hardrock mineral properties are capitalized. Provisions are made against earnings based on regular assessments to reflect declines in property values. Exploration for hardrock minerals is expensed as incurred.

Depreciation of oil, gas and sulphur plants and production equipment and coal preparation plants is provided for by the unit of production method. Depreciation of other assets is provided for by the straight-line method at rates from 4% to 30%, based on the estimated service life of each group of assets.

Upon disposal of properties, plant and equipment, the difference between the proceeds and net book value is charged or credited to earnings.

Provisions are made on a unit of production basis for reclamation of coal mining sites based on estimated future liabilities for such costs.

Maintenance and repairs are charged against earnings and renewals and betterments which extend the economic life of the properties, plant and equipment are capitalized.

#### JOINT VENTURES

The Company conducts substantially all of its oil, gas and sulphur exploration and production activities on a joint venture basis and the accounts reflect the Company's proportionate interest in such activities.

#### INCOME TAXES

Income taxes are accounted for by the tax allocation method. Differences between the total income tax expense and taxes currently payable are reflected as deferred income taxes. Tax benefits from investment tax credits, earned depletion and frontier exploration allowance (the latter expired 1980 March 31) are reflected as a reduction in taxes in the year claimed.

# CONSOLIDATED BALANCE SHEET

1980 and 1979 December 31

	1980	1979		
	(thousands)			
<b>ASSETS</b>				
<b>CURRENT ASSETS</b>				
Cash	\$ 349	\$ 1,683		
Short term investments	82,670	2,806		
Accounts receivable	117,114	67,594		
Income taxes prepaid	—	804		
Inventories (Note 3)	18,110	12,424		
Prepaid expenses	3,514	938		
	221,757	86,249		
<b>INVESTMENTS AND OTHER ASSETS</b>	17,261	14,427		
<b>EXPLORATORY DRILLING IN PROGRESS</b>	25,218	16,073		
<b>PROPERTIES, PLANT AND EQUIPMENT (Note 4)</b>	515,459	424,161		
	\$779,695	\$540,910		
<b>LIABILITIES</b>				
<b>CURRENT LIABILITIES</b>				
Bank indebtedness	\$ 18,293	\$ 2,468		
Accounts payable and accrued liabilities (Note 12)	83,110	55,496		
Income and other taxes payable	26,004	—		
Current portion of long term debt	3,006	411		
	130,413	58,375		
<b>LONG TERM DEBT LESS CURRENT PORTION (Note 5)</b>	238,373	152,934		
<b>DEFERRED INCOME TAXES</b>	106,002	77,299		
	474,788	288,608		
<b>SHAREHOLDERS' EQUITY</b>				
<b>SHARE CAPITAL (Note 9)</b>				
Authorized — Unlimited number of preferred and common shares				
Issued — 1980 — 21,565,439 common shares;				
1979 — 21,557,798 common shares	132,071	131,588		
<b>RETAINED EARNINGS (Note 10)</b>	172,836	120,714		
	304,907	252,302		
	\$779,695	\$540,910		

## Commitments and Contingencies (Notes 11 and 14)

The Company follows the successful efforts method of accounting for oil, gas and sulphur properties as described in the Summary of Significant Accounting Principles.

Signed on behalf of the Board

W. D. Clark Director

B. F. Isautier Director

# CONSOLIDATED STATEMENT OF NET EARNINGS

For the three years ended 1980 December 31

	1980	1979	1978
(restated Note 1)			
(thousands except per share amounts)			
<b>REVENUES</b>			
Sales	<b>\$320,312</b>	\$204,909	\$188,347
Prior years' royalty rebates (Note 14 [c])	—	8,750	—
Investment and other income (Note 14 [e])	<b>17,328</b>	10,465	6,747
	<b>337,640</b>	224,124	195,094
<b>EXPENSES</b>			
Production	<b>72,936</b>	62,291	57,792
Administrative	<b>26,260</b>	19,259	15,230
Interest	<b>27,521</b>	18,113	7,525
Foreign exchange (gains) and losses	(2,274)	951	212
Exploration (Note 7)	<b>41,407</b>	45,366	26,520
Depletion, depreciation and impairment of properties (Note 14 [d])	<b>42,156</b>	21,956	18,219
	<b>208,006</b>	167,936	125,498
<b>EARNINGS BEFORE INCOME TAXES</b>	<b>129,634</b>	56,188	69,596
<b>INCOME TAXES (Note 6)</b>			
Current	<b>35,873</b>	5,678	26,918
Deferred	<b>28,704</b>	17,893	11,460
	<b>64,577</b>	23,571	38,378
<b>NET EARNINGS</b>	<b>\$ 65,057</b>	\$ 32,617	\$ 31,218
<b>NET EARNINGS PER SHARE (based on average number of shares outstanding during the year)</b>	<b>\$ 3.02</b>	\$ 1.51	\$ 1.44

# CONSOLIDATED STATEMENT OF RETAINED EARNINGS

For the three years ended 1980 December 31

	1980	1979	1978
(Restated Note 1)			
(thousands)			
Balance at beginning of year	<b>\$120,714</b>	\$ 98,229	\$ 75,419
Net earnings	<b>65,057</b>	32,617	31,218
Dividend (per common share — 1980 — 60¢; 1979 — 47¢; 1978 — 39¢)	(12,935)	(10,132)	(8,408)
Balance at end of year	<b>\$172,836</b>	\$120,714	\$ 98,229

# CONSOLIDATED STATEMENT OF CHANGES IN FINANCIAL POSITION

For the three years ended 1980 December 31

	1980	1979	1978
SOURCE OF FUNDS			(restated Note 1)
From operations			
Net earnings	\$ 65,057	\$ 32,617	\$ 31,218
Add items not affecting working capital and exploration expenses	112,964	83,051	56,201
Cash flow from operations	178,021	115,668	87,419
Per share	\$8.26	\$5.37	\$4.06
Share capital issued	483	—	—
Long term debt	83,956	73,492	25,457
Other changes	(1,541)	2,587	6,384
	260,919	191,747	119,260
APPLICATION OF FUNDS			
Capital and exploration expenditures (Note 7)	178,512	146,217	97,666
Acquisition of other companies (Note 2)	3,922	38,309	7,022
Reduction of long term debt	2,080	114	260
Dividend	12,935	10,132	8,408
	197,449	194,772	113,356
INCREASE (DECREASE) IN WORKING CAPITAL	63,470	(3,025)	5,904
Working capital at beginning of year	27,874	30,899	24,995
Working capital at end of year	\$ 91,344	\$ 27,874	\$ 30,899
ANALYSIS OF INCREASE (DECREASE) IN WORKING CAPITAL			
Cash	\$ (1,334)	\$ 815	\$ 357
Short term investments	79,864	(15,152)	(43,562)
Accounts receivable	49,520	21,147	12,371
Income taxes prepaid	(804)	804	—
Inventories	5,686	947	5,370
Prepaid expenses	2,576	(1,436)	(713)
Bank indebtedness	(15,825)	(2,468)	21,888
Accounts payable and accrued liabilities	(27,614)	(13,895)	(15,210)
Income and other taxes payable	(26,004)	5,572	15,381
Current portion of long term debt	(2,595)	641	10,022
INCREASE (DECREASE) IN WORKING CAPITAL	\$ 63,470	\$ (3,025)	\$ 5,904

# NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

## 1. CHANGES IN ACCOUNTING POLICIES

Effective 1979 January 01, the Company changed its method of accounting for oil, gas and sulphur properties from the full cost method to the successful efforts method of accounting as more fully explained in the Summary of Significant Accounting Principles. The policy with respect to mining exploration costs was also changed from capitalizing such costs with regular charges against net earnings for amortization to that of charging the costs against net earnings as incurred. These changes were adopted as they result in a more conservative presentation of net earnings, particularly during periods of high exploration activity. The adjustments have been recorded retroactively and the consolidated statements of net and retained earnings previously reported have been restated as follows:

	Adjustments			
	Previously Reported	Successful Efforts	Mining Costs	Restated
Net earnings for the year ended 1978 December 31 (thousands)	\$ 40,914	\$ (8,971)	\$ (725)	\$31,218
Per share	\$ 1.90	\$ (0.42)	\$ (0.04)	\$ 1.44
Retained earnings 1978 January 01 (thousands)	\$157,784	\$ (76,278)	\$ (6,087)	\$75,419

## 2. ACQUISITIONS

On 1980 December 31 the Company purchased all of the shares of Elf Hydrocarbure du Québec Ltée. (EHQ) from Société Nationale Elf Aquitaine, parent of the Company for \$935,000. EHQ is engaged in marketing refined petroleum products, principally domestic heating fuels, in the Province of Quebec.

In early 1979 the Company purchased through a public offering all of the shares of Universal Gas Co. Ltd. (Universal), a company engaged in exploration and production of oil and gas for \$23,159,000.

These acquisitions have been accounted for as purchases and the accounts consolidated with those of the Company from the date of acquisition. The consideration paid for the shares in excess of net book value at acquisition of \$1,025,000 for EHQ has been allocated to properties, plant and equipment and to the extent allocated to plant and equipment will be depreciated over the remaining life of the assets. The excess consideration paid over book value for Universal of \$19,079,000 has been allocated to oil, gas and sulphur properties and is being amortized by the unit of production method based on estimated proved reserves.

The purchase price of these acquisitions was allocated as follows:

	EHQ	Universal
Current assets		(thousands)
Exploratory drilling in progress	\$ 16,321	\$ 4,788
Properties, plant and equipment	—	443
Other assets	7,056	37,812
Current liabilities	—	54
Long term debt	(19,308)	(19,938)
	(3,134)	(—)
	\$ 935	\$23,159

In reporting the cost of these acquisitions in the Consolidated Statement of Changes in Financial Position, the working capital deficiency of \$2,987,000 of EHQ and \$15,150,000 of Universal at acquisition has been added to the consideration for the shares resulting in a total application of funds of \$3,922,000 and \$38,309,000 respectively.

The results of consolidated operations of the Company assuming these companies had been acquired 1978 January 01, the commencement date of the comparative data presented herein, have not been reported as the operations prior to acquisition were not material.

Penmore, S.A., an insurance company was incorporated in 1978 and capitalized in the amount of \$7,022,000. This wholly owned subsidiary is accounted for by the equity method.

### 3. INVENTORIES

	1980	1979
(thousands)		
Materials and supplies — oil, gas and sulphur	\$11,000	\$ 6,996
— coal	2,611	2,260
Coal	1,959	3,168
Refined petroleum products	2,540	—
	<b>\$18,110</b>	<b>\$12,424</b>

### 4. PROPERTIES, PLANT AND EQUIPMENT

	1980			1979		
	Cost	Accumulated provisions	Net	Cost	Accumulated provisions	Net
(thousands)						
Oil, gas and sulphur						
Proved						
Canada	\$365,070	\$107,071	\$257,999	\$283,512	\$ 87,800	\$195,712
United States	35,248	7,282	27,966	12,076	3,256	8,820
Unproved						
Canada	80,321	14,081	66,240	63,774	4,832	58,942
United States	21,509	2,426	19,083	23,354	2,487	20,867
Coal — United States	138,024	20,562	117,462	136,882	14,885	121,997
Office buildings — Canada	24,153	4,500	19,653	21,580	3,757	17,823
Other — Canada	7,056	—	7,056	—	—	—
	<b>\$671,381</b>	<b>\$155,922</b>	<b>\$515,459</b>	<b>\$541,178</b>	<b>\$117,017</b>	<b>\$424,161</b>

### 5. LONG TERM DEBT

	1980	1979
(thousands)		
9 3/4 % notes due in 1998, subject to repayments commencing in 1981 (U.S. \$30,000,000)	\$ 31,429	\$ 31,172
12% notes due in 1987, subject to repayments commencing in 1984 (U.S. \$15,000,000)	17,214	—
11 1/4 % notes due in 1985 (U.S. \$30,000,000)	35,058	—
10 1/4 % office building mortgage due in 1994, subject to monthly repayments	13,923	13,100
Floating rate bank loans		
— Due in 1983 with interest of 20% at 1980 December 31 (U.S. \$10,000,000) (see [a] below)	11,900	—
— Due in 1984 with interest of 23 3/8 % at 1980 December 31; 15 5/8 % at 1979 December 31 (U.S. \$30,000,000)	31,169	31,169
— Due in 1990 with interest of 18 1/4 % at 1980 December 31	58,333	—
— Due within one year with interest at 15 3/8 % (U.S. \$3,500,000) (see [b] below)	—	4,084
Commercial paper		
Issued at an average interest cost of 17% and maturing on varying dates within one year (see [a] below)	35,806	—
Issued at an average interest cost of 13.9% and maturing on varying dates within one year (U.S. \$60,605,000) (see [b] below)	—	70,742
Other	6,547	3,078
Less current portion	241,379	153,345
	3,006	411
	<b>\$238,373</b>	<b>\$152,934</b>

(a) The commercial paper and the bank loan due in 1983 are classified as long term debt as they were replaced in part by the issue in 1981 January of \$50,000,000 floating rate notes due in 1991 and the remainder is supported by long term offers of credit facilities. These credit facilities totalling \$90,000,000 available in Canadian or U.S. funds are convertible into term loans of varying maturities, are subject to certain standby fees and expire as follows: 1981 - \$10,000,000; 1982 - \$20,000,000; 1983 - \$10,000,000; 1987 - \$35,000,000; and \$15,000,000 until cancelled after 13 months notice.

(b) The commercial paper and the bank loan with interest at 15 3/8% outstanding at 1979 December 31 were classified as long term debt as they were replaced in part by the issue in 1980 January of U.S. \$30,000,000 11 1/4% notes due in 1985 and the remainder was supported by long term offers of credit facilities.

(c) Long term repayments for the next five years are: 1981 - \$3,006,000; 1982 - \$13,115,000; 1983 - \$5,735,000; 1984 - \$35,996,000; and 1985 - \$39,905,000. These repayments have been determined assuming the commercial paper not replaced by the notes issued in 1981 January referred to in (a) above was converted on 1981 January 01 into term loans under the offers of credit facilities.

(d) If the long term debt payable in United States funds were translated at the exchange rate in effect at the end of the year, long term debt would have been \$249,100,000 at 1980 December 31 (1979 - \$160,668,000).

## 6. INCOME TAXES

Total income tax expense all of which relates to Canadian operations was \$64,577,000 in 1980, \$23,571,000 in 1979 and \$38,378,000 in 1978, effective rates of 50%, 42% and 55% on earnings before income taxes respectively. Such income tax expense varies from the amounts that would be computed by applying the combined Canadian federal and provincial income tax rates to earnings before income taxes for the following reasons:

	1980		1979		1978	
	Amount	% of Pre-tax Earnings	Amount	% of Pre-Tax Earnings	Amount	% of Pre-tax Earnings
Computed income tax expense	(\$63,521)	49	(\$26,408)	47	(\$32,710)	47
Increase (decrease) in income taxes resulting from:						(restated)
Non-deductible royalties and rentals less resource allowance and provincial rebates	17,468	13	8,331	15	13,896	20
Income tax depletion and frontier exploration allowance	(16,242)	(12)	(14,713)	(26)	(10,364)	(15)
Revision of prior year's estimate (see (a) below)	—	—	(2,846)	(5)	—	—
Net losses of subsidiaries	1,745	1	5,831	10	3,563	5
Other	(1,915)	(1)	560	1	(1,427)	(2)
Income tax expense	\$64,577	50	\$23,571	42	\$38,378	55

(a) Income tax expense for 1979 has been reduced by this amount which results from additional capital expenditure accruals being claimed for tax purposes in excess of estimated amounts recorded at 1978 December 31.

Deferred income taxes result from timing differences in the recognition of income and expenses for income tax and financial statement purposes. The sources of these differences and the tax effect of each were as follows:

	1980	1979	1978
			(restated)
Capital cost allowance deducted for income tax purposes in excess of depreciation	\$ 7,320	\$ 4,553	\$ 322
Exploration and development expenditures deducted for income tax purposes in excess of provisions for depletion and impairment of lands and exploration	20,666	13,809	11,518
Other	718	(469)	(380)
	\$28,704	\$17,893	\$11,460

Certain U.S. subsidiary companies have available for income tax purposes accumulated operating losses and investment tax credits amounting to U.S. \$60,610,000 which expire: 1982 - \$171,000; 1983 - \$1,738,000; 1984 - \$7,493,000; 1985 - \$8,697,000; 1986 - \$28,742,000 and 1987 - \$13,769,000. The realization of these tax benefits is dependent upon the future profitability of these subsidiaries. No recognition of the potential tax benefits has been taken into account.

## 7. LINES OF BUSINESS INFORMATION

The following information is classified according to the Company's lines of business as determined by the Board of Directors.

	1980				1979				1978						
	United	Other	/		United	Other	/		United	Other	/				
	Canada	United States	Foreign	Total	Canada	United States	Foreign	Total	Canada	United States	Foreign	Total			
(restated)															
(thousands)															
Revenues															
Oil, gas and sulphur	\$262,147	\$ 16,533	\$ —	\$278,680	\$172,912	\$ 4,053	\$ —	\$176,965	\$147,180	\$ 1,315	\$ —	\$148,495			
Coal	—	52,730	—	52,730	—	42,090	—	42,090	—	44,283	—	44,283			
Office buildings	5,612	—	—	5,612	2,881	—	—	2,881	2,263	—	—	2,263			
Other	—	—	618	618	—	—	2,188	2,188	—	—	53	53			
	<b>\$267,759</b>	<b>\$ 69,263</b>	<b>\$</b>	<b>618</b>	<b>\$337,640</b>	<b>\$175,793</b>	<b>\$ 46,143</b>	<b>\$</b>	<b>2,188</b>	<b>\$224,124</b>	<b>\$149,443</b>	<b>\$ 45,598</b>	<b>\$</b>	<b>53</b>	<b>\$195,094</b>
Operating profits (losses)															
Oil, gas and sulphur	\$160,007	\$ (688)	\$ 235	\$159,554	\$ 89,493	\$ (4,661)	\$ (1,526)	\$ 83,306	\$ 86,180	\$ (2,358)	\$ (119)	\$ 83,703			
Coal	—	(3,472)	—	(3,472)	—	(8,752)	—	(8,752)	—	(4,813)	—	(4,813)			
Mining	(3,206)	(209)	—	(3,415)	(1,998)	(306)	—	(2,304)	(1,774)	(62)	—	(1,836)			
Office buildings	2,027	—	—	2,027	1,308	—	—	1,308	815	—	—	815			
Other	—	—	562	562	—	—	1,927	1,927	—	—	(393)	(393)			
	<b>\$158,828</b>	<b>\$ (4,369)</b>	<b>\$</b>	<b>797</b>	<b>\$155,256</b>	<b>\$ 88,803</b>	<b>\$ (13,719)</b>	<b>\$</b>	<b>401</b>	<b>75,485</b>	<b>\$ 85,221</b>	<b>\$ (7,233)</b>	<b>\$</b>	<b>(512)</b>	<b>77,476</b>
Interest expense, foreign exchange gains and losses and general corporate expenses					<b>25,622</b>				<b>19,297</b>				<b>7,880</b>		
Earnings before income taxes					<b>129,634</b>				<b>56,188</b>				<b>69,596</b>		
Income tax expense					<b>64,577</b>				<b>23,571</b>				<b>38,378</b>		
Net earnings					<b>\$ 65,057</b>				<b>\$ 32,617</b>				<b>\$ 31,218</b>		

The provisions for depletion, depreciation and impairment of properties deducted in determining the above operating profits (losses) were as follows:

Oil, gas and sulphur	\$ 30,920	\$ 4,178	\$ —	\$ 35,098	\$ 13,080	\$ 2,950	\$ —	\$ 16,030	\$ 12,520	\$ 1,426	\$ —	\$ 13,946
Coal	—	6,315	—	6,315	—	5,589	—	5,589	—	4,000	—	4,000
Office buildings	743	—	—	743	337	—	—	337	273	—	—	273
	<b>\$ 31,663</b>	<b>\$ 10,493</b>	<b>\$ —</b>	<b>\$ 42,156</b>	<b>\$ 13,417</b>	<b>\$ 8,539</b>	<b>\$ —</b>	<b>\$ 21,956</b>	<b>\$ 12,793</b>	<b>\$ 5,426</b>	<b>\$ —</b>	<b>\$ 18,219</b>

Additional information with respect to net revenues from oil, gas and sulphur producing operations follows:

Sales and other production income	\$253,041	\$ 14,290	\$ —	\$267,331	\$159,324	\$ 3,992	\$ —	\$163,316	\$143,027	\$ 1,289	\$ —	\$144,316
Production costs	20,078	3,886	—	23,964	17,652	885	—	18,537	14,607	233	—	14,840
Net revenues	<b>\$232,963</b>	<b>\$ 10,404</b>	<b>\$ —</b>	<b>\$243,367</b>	<b>\$141,672</b>	<b>\$ 3,107</b>	<b>\$ —</b>	<b>\$144,779</b>	<b>\$128,420</b>	<b>\$ 1,056</b>	<b>\$ —</b>	<b>\$129,476</b>

	1980				1979				1978			
	United Canada	United States	Other Foreign	Total	United Canada	United States	Other Foreign	Total	United Canada	United States	Other Foreign	Total
(restated)												
(thousands)												
Capital and exploration expenditures:												
Oil, gas and sulphur												
Property acquisitions												
Proved	\$ —	\$ —	\$ —	\$ —	\$ 7,930	\$ —	\$ —	\$ 7,930	\$ 7,008	\$ —	\$ —	\$ 7,008
Unproved	23,835	2,048	—	25,883	9,451	8,931	—	18,382	4,325	1,310	—	5,635
	23,835	2,048	—	25,883	17,381	8,931	—	26,312	11,333	1,310	—	12,643
Exploration expenditures												
Exploratory drilling capitalized	35,610	8,350	—	43,960	22,900	3,692	—	26,592	5,935	2,692	—	8,627
Exploration expensed												
Property rentals	2,033	439	—	2,472	1,884	348	—	2,232	1,574	279	—	1,853
Geological and geophysical	10,083	3,214	(235)	13,062	9,172	1,587	1,526	12,285	11,011	1,097	119	12,227
Dry holes	18,909	3,946	—	22,855	26,936	1,983	—	28,919	10,148	701	—	10,849
Increase (decrease) in exploratory drilling in progress	8,081	1,065	—	9,146	(929)	189	—	(740)	13,829	417	—	14,246
	74,716	17,014	(235)	91,495	59,963	7,799	1,526	69,288	42,497	5,186	119	47,802
Development expenditures												
Development drilling	5,077	7,926	—	13,003	6,803	2,044	—	8,847	3,515	593	—	4,108
Plant and equipment	36,977	3,421	—	40,398	19,503	1,267	—	20,770	10,606	978	—	11,584
	42,054	11,347	—	53,401	26,306	3,311	—	29,617	14,121	1,571	—	15,692
Total oil, gas and sulphur	140,605	30,409	(235)	170,779	103,650	20,041	1,526	125,217	67,951	8,067	119	76,137
Coal												
Plant and equipment	—	1,721	—	1,721	—	7,084	—	7,084	—	15,782	—	15,782
Other	—	421	—	421	—	1,529	—	1,529	—	1,785	—	1,785
Total coal	—	2,142	—	2,142	—	8,613	—	8,613	—	17,567	—	17,567
Office building	2,573	—	—	2,573	10,457	—	—	10,457	2,371	—	—	2,371
Mining exploration expensed	2,833	185	—	3,018	1,622	308	—	1,930	1,517	74	—	1,591
	\$146,011	\$ 32,736	\$ (235)	\$178,512	\$115,729	\$ 28,962	\$ 1,526	\$146,217	\$ 71,839	\$ 25,708	\$ 119	\$ 97,666

Presented as follows in the financial statements:

Capital expenditures	\$104,072	\$ 23,887	\$ —	\$127,959	\$ 77,044	\$ 24,547	\$ —	\$101,591	\$ 33,760	\$ 23,140	\$ —	\$ 56,900
Increase (decrease) in exploratory drilling in progress	8,081	1,065	—	9,146	(929)	189	—	(740)	13,829	417	—	14,246
Charged to net earnings	33,858	7,784	(235)	41,407	39,614	4,226	1,526	45,366	24,250	2,151	119	26,520
	\$146,011	\$ 32,736	\$ (235)	\$178,512	\$115,729	\$ 28,962	\$ 1,526	\$146,217	\$ 71,839	\$ 25,708	\$ 119	\$ 97,666

Aggregate carrying value of assets at end of year:

Oil, gas and sulphur	\$463,968	\$126,533	\$ —	\$590,501	\$339,860	\$ 36,670	\$ —	\$376,530	\$244,965	\$ 17,151	\$ —	\$262,116
Coal	—	136,177	—	136,177	—	137,365	—	137,365	—	138,148	—	138,148
Office buildings	19,653	—	—	19,653	17,823	—	—	17,823	7,704	—	—	7,704
Other	23,431	—	9,933	33,364	—	—	9,192	9,192	—	—	9,036	9,036
	\$507,052	\$262,710	\$ 9,933	\$779,695	\$357,683	\$174,035	\$ 9,192	\$540,910	\$252,669	\$155,299	\$ 9,036	\$417,004

## 8. QUARTERLY FINANCIAL INFORMATION (unaudited)

	1st Quarter			2nd Quarter			3rd Quarter			4th Quarter		
	1980	1979	1978	1980	1979	1978	1980	1979	1978	1980	1979	1978
(thousands except per share amounts)												
Revenues	\$69,142	\$55,591	\$40,276	\$77,112	\$52,091	\$47,229	\$84,968	\$55,560	\$50,540	\$106,418	\$60,882	\$57,049
Expenses	35,801	47,194	19,240	40,364	30,124	24,213	58,076	43,194	35,265	73,765	47,424	46,780
Income taxes	16,014	3,286	13,071	17,511	10,851	11,539	14,708	4,995	8,111	16,344	4,439	5,657
Net earnings	\$17,327	\$ 5,111	\$ 7,965	\$19,237	\$11,116	\$11,477	\$12,184	\$ 7,371	\$ 7,164	\$16,309	\$ 9,019	\$ 4,612
Net earnings per share	\$ 0.80	\$ 0.24	\$ 0.37	\$ 0.90	\$ 0.51	\$ 0.53	\$ 0.56	\$ 0.34	\$ 0.33	\$ 0.76	\$ 0.42	\$ 0.21

The 1978 amounts above have been restated to reflect the changes in accounting policies more fully described in Note 1.

## 9. SHARE CAPITAL

By Special Resolution at the Shareholders' Meeting on 1980 April 15, the Company was continued under the Canada Business Corporation Act and its charter documents were amended. Under the amendments the previously authorized 30,000,000 common shares were replaced by the creation of an unlimited number of preferred shares and common shares, both without par value, with the latter corresponding in all material respects to the previous common shares.

As at 1980 December 31, 192,359 common shares (1979 December 31 - 200,000 shares) were reserved for issuance under the Company's Stock Bonus Plan of which 10,250 shares were awarded to employees for services in 1979 and 30,905 shares in 1980. The consideration attributed to these shares was \$51.25 for those awarded in 1979 and \$66.50 for those in 1980, being the market value at the date of the award. During 1980, 7,641 shares of these awards were issued under the Plan with the total consideration of \$483,000 credited to share capital and charged to administrative expenses and 3,886 shares were cancelled upon termination of employment of the recipient. The remaining 29,628 shares awarded will be issued, subject to continued employment of the recipients and to the other terms of the Plan, during the years 1981 to 1984.

## 10. DIVIDEND RESTRICTION

Pursuant to provisions of the agreements relating to the 9 3/4% and 12% notes due in 1998 and 1987 respectively, cash dividends are restricted as at 1980 December 31 to retained earnings in excess of \$27,431,000.

## 11. CONTINGENCIES

The Company is a defendant under a Statement of Claim claiming infringement of a patent relating to a miscible flood oil recovery process. The plaintiff is asking for an injunction restraining the Company from using the process in addition to damages or an accounting and payment of profits derived from using the process. The Company intends to defend this action. The ultimate outcome of the action cannot be predicted at this time.

The Stolberg gas pipeline, completed in 1978, was replaced in 1980 as a result of failure of the pipe in sour gas service. The total cost of the replacement was \$14,400,000 of which the Company's 21.4% share was \$3,100,000. The Company and its partners in the project are currently assessing possible liabilities arising from this failure, however, no conclusions have been reached or claims advanced at this time.

There are certain other contingent liabilities existing as a result of various claims and disputes.

In the opinion of management the outcome of all of these contingencies will not have a materially adverse effect upon the Company's financial position.

## 12. RELATED PARTY TRANSACTIONS

The Company and Société Nationale Elf Aquitaine (Production) (SNEA[P]), a wholly-owned subsidiary of the Company's parent, Société Nationale Elf Aquitaine (SNEA), entered into a year to year agreement in 1977 under which the benefit of research performed by SNEA[P], and which is of application to the Company, is available to the Company. The agreement provides that the Company pay a share of the cost of such applicable research under a formula based on the Company's expenditures on exploration, development, and plant construction in relation to aggregate like expenditures by SNEA[P] and other SNEA subsidiaries including the Company. The Company's share of costs of applicable research which are included in oil, gas and sulphur operating expenses were: 1980 - \$1,867,000; 1979 - \$1,777,000; and 1978 - \$620,000.

The Company and SNEA[P] have also entered into an agreement effective 1980 January 01 whereby SNEA[P] will provide services required by the Company but which cannot be more advantageously obtained from unrelated parties. Charges for these services during 1980 were \$3,053,000 and were \$2,584,000 and \$1,107,000 for 1979 and 1978 respectively pursuant to the arrangements for such services in those years. Additional charges by SNEA[P] for expenses incurred in France relating to SNEA[P] personnel who are employed by the Company in Canada were: 1980 - \$237,000; 1979 - \$309,000; and 1978 - \$278,000. To the extent the charges for these services and expenses are not recovered from joint venture partners, they are included in capital and exploration expenditures and operating and administrative expenses.

Reference is made to Note 2 relating to the acquisition of a subsidiary of SNEA by the Company.

During 1979 a wholly-owned subsidiary of the Company acquired from Elf Aquitaine, Inc., a wholly-owned subsidiary of SNEA, a fifty per cent interest in approximately 131,500 acres of non-producing oil and gas leases in the United States for \$5,900,000.

Accounts payable and accrued liabilities includes \$3,192,000 due currently to SNEA and its subsidiaries at 1980 December 31 and \$2,237,000 at 1979 December 31.

The Company owns approximately 43% of Cansulex Limited (Cansulex), a producer owned company marketing sulphur outside North America. The ownership in this company is reallocated annually depending on annual volume commitments by the respective owners. Sulphur sales after royalties by the Company through Cansulex were: 1980 - \$67,520,000; 1979 - \$18,942,000; and 1978 - \$9,523,000. As at 1980 and 1979 December 31, Cansulex was indebted to the Company for \$1,977,000 and \$2,052,000 respectively.

## 13. DIFFERENCES BETWEEN CANADIAN AND UNITED STATES ACCOUNTING PRINCIPLES

The Company follows accounting principles generally accepted in Canada. These are the same as United States accounting principles except as described below:

- Long term debt payable in foreign currencies is recorded at the foreign exchange rate in effect when the debt was incurred. Under United States accounting principles such debt would have been stated at the exchange rate in effect at the end of the period.
- Effective 1979 January 01 the Company's practice with respect to mining exploration costs was changed from capitalizing such costs with regular charges against net earnings for amortization to that of charging the costs against net earnings as incurred. The adjustment for this change in practice to 1978 December 31 of \$6,812,000 was made retroactively and prior year accounts were restated. Under United States accounting principles this adjustment would have been charged against net earnings in 1979, the year in which the change was made.

The following reconciles the reported net earnings with those had United States accounting principles been followed:

	1980		1979		1978	
	Amount	Per Share	Amount	Per Share	Amount	Per Share
Reported	\$65,057,000	\$3.02	\$32,617,000	\$1.51	\$31,218,000	\$1.44
Foreign exchange gains (losses)	(2,994,000)	(.14)	1,211,000	.06	(5,489,000)	(.25)
Mining exploration costs	—	—	(6,812,000)	(.32)	725,000	.04
Net earnings under U.S. accounting principles	\$62,063,000	\$2.88	\$27,016,000	\$1.25	\$26,454,000	\$1.23

## 14. OTHER INFORMATION

### (a) Pensions

The Company through formal pension plans and coal union health and retirement benefit plans provides for pensions for substantially all employees. The plans maintained by the Company are fully funded based on determinations by the Company's independent actuarial consultant and costs were: 1980 - \$2,516,000; 1979 - \$2,082,000; and 1978 - \$1,735,000. In addition costs of contributions to the coal union health and retirement plans were: 1980 - \$1,558,000; 1979 - \$1,299,000; and 1978 - \$935,000.

In the case of pension plans covering Canadian employees, the present value based on an interest factor of 5 $\frac{1}{2}$ % of vested and non-vested benefits was \$2,966,000 and the plan's assets were \$3,107,000, determined as at 1978 December 31, the date of the latest triennial actuarial valuation of the plan as required under Canadian pension legislation. The amounts of vested and non-vested benefits have not been separately determined. The pension plan covering United States employees not covered by coal union health and retirement plans had present values of vested and non-vested benefits of \$1,155,000 and \$135,000 respectively computed using a rate of return 5 $\frac{1}{4}$ % and determined as at 1980 January 01, the date of the latest actuarial valuation. Plan assets as at the same date approximate liabilities.

Under the provisions of the coal union agreements the companies have guaranteed the benefits provided during the terms of the contract. Vested benefits under these plans may be underfunded and the companies may have future liabilities under the provisions of the U.S. pension legislation. It is not anticipated that the Company's share of such liabilities will have a material effect on the Company's financial position.

### (b) Rental Obligations

The annual rental obligations for buildings and equipment under long term leases are : 1981 - \$2,764,000; 1982 - \$2,212,000; 1983 - \$1,886,000; 1984 - \$1,532,000; 1985 - \$489,000; and \$1,817,000 thereafter. Actual rental expense was: 1980 - \$3,462,000; 1979 - \$3,629,000; and 1978 - \$3,991,000.

### (c) Royalty Rebates

Revenues for the year ended 1979 December 31 include royalty rebates of \$8,750,000 relating to prior years (1978 - \$4,735,000; 1977 - \$4,015,000). These rebates were recoverable only by way of reduction of royalties otherwise payable during 1979 and result from the Company's enhanced recovery program at the Rainbow Lake field under an Alberta Government plan encouraging such programs.

### (d) Depreciation

Commencing 1979 January 01, the Company, because it is now processing large volumes of gas for others under contract at its Ram River plant thereby extending the life of the plant, changed its practice with respect to depreciation of this plant. Previously only the Company's reserves were used in determining unit of production depreciation of the plant whereas now reserves of others which will be processed are also included. This change reduced depreciation which would have otherwise been recorded for the year ended December 31, 1979 by \$2,085,000 and increased net earnings after taxes for the year by \$1,105,000.

### (e) Equity in Subsidiaries

Investments and other income of the Company includes net earnings of 1980 - \$824,000; 1979 - \$1,290,000; and 1978 - Nil, of its wholly owned insurance subsidiary, Penmore, S.A., and 1980 - \$1,628,000; 1979 - \$1,830,000; and 1978 - \$1,651,000 from its 33 $\frac{1}{3}$ % interest in Rainbow Pipe Line Company Ltd. both of which are accounted for by the equity method. In aggregate assets and liabilities of these subsidiaries are not significant to the related consolidated totals.

# RESERVES AND RELATED INFORMATION

(unaudited)

## RESERVES OF OIL, GAS LIQUIDS, GAS, SULPHUR AND COAL

The information presented below is based on current estimates of oil, gas liquids, gas, sulphur and coal reserves as estimated by the Company's engineering staff. The Company wishes to emphasize these reserve estimates by their very nature are subject to constant changes and revisions, that estimates of newly discovered reserves are more imprecise than those of presently producing properties and that an accurate determination of reserves at a given point in time may not be possible because of the time needed for development drilling and further studies.

Proved reserves includes proved developed and undeveloped reserves. Estimates of proved developed reserves include only those reserves which can be expected to be recovered through existing wells with existing equipment and operating methods and under existing economic conditions. Estimates of proved undeveloped reserves include only those reserves which are expected to be recovered on undrilled acreage from new wells which are virtually certain of production when drilled or from presently existing wells which would require relatively major expenditures to effect recompletion.

The figures presented are believed to be reasonable estimates of reserves which may be expected to be recoverable commercially by the Company at current prices and costs under existing regulatory practices and with existing conventional equipment and operating methods. They do not include additional reserves which may be found by new discoveries on presently held properties, by extensions of reservoirs presently productive, or by improved producing techniques not yet pilot-tested or installed.

Net reserves are estimated after deduction of royalties and represent only that future production which is owned by the Company. In Canada, government royalty rates can vary depending on prices, production volumes, the timing of initial production and future changes in legislation. Due to the uncertainty of future royalty rates, the net reserves in Canada have been calculated on the basis of the royalty and production rates and prices in effect at the respective year ends. Future royalties may be materially different. In the United States, royalties are generally determined on a fixed percentage interest and vary in direct proportion to fluctuations in reserve estimates.

The petroleum industry in Canada has officially converted to the International System of Units for measuring and reporting. To facilitate the conversion to the measures for oil and gas liquids (bbls), gas (mcf), sulphur (long tons) and coal (short tons) still used in other countries, the following table is included.

	To Convert From		To				Multiply by	
	Cubic metres (m <sup>3</sup> )		Barrels (bbls)		Thousands of cubic feet (mcf)		6.29	
Oil and gas liquids	Cubic metres (m <sup>3</sup> )		Barrels (bbls)		Thousands of cubic feet (mcf)		0.035494	
Gas	Cubic metres (m <sup>3</sup> )				Long tons		0.9842	
Sulphur	Tonnes (t)				Short tons		1.10231	
Coal	Tonnes (t)							

	Oil and gas liquids						Gas		Sulphur		Coal	
	Canada		United States		Total		Canada		Canada		United States	
	Gross	Net	Gross	Net	Gross	Net	Gross	Net	Gross	Net		
	(millions of cubic metres)						(billions of cubic metres)		(millions of tonnes)			
Proved developed and undeveloped reserves												
1979 January 01	19.9	10.7	.1	.1	20.0	10.8	20.3	12.5	11.5	9.6	61.9	
Revisions of previous estimates	.2	1.1	—	—	.2	1.1	(.6)	(1.2)	(.2)	(.2)	(2.1)	
Purchase of reserves	—	—	—	—	—	—	1.3	.9	—	—	7.4	
Discoveries and extensions	.2	.1	.1	.1	.3	.2	1.6	1.0	—	—	—	
Production	(1.8)	(1.1)	—	—	(1.8)	(1.1)	(1.2)	(.8)	(.7)	(.6)	(1.2)	
1979 December 31	18.5	10.8	.2	.2	18.7	11.0	21.4	12.4	10.6	8.8	66.0	
Revisions of previous estimates	(.5)	(1.3)	—	—	(.5)	(1.3)	(.7)	(.6)	1.4	1.2	(4.8)	
Purchase of reserves	—	—	—	—	—	—	—	—	—	—	2.0	
Discoveries and extensions	—	—	.3	.2	.3	.2	4.2	2.3	—	—	—	
Production	(1.7)	(1.0)	(.1)	(.1)	(1.8)	(1.1)	(1.3)	(.8)	(1.2)	(1.0)	(1.4)	
1980 December 31	16.3	8.5	.4	.3	16.7	8.8	23.6	13.3	10.8	9.0	61.8	
Proved developed reserves only												
1979 January 01	19.4	10.4	.1	.1	19.5	10.5	17.1	10.5	11.5	9.6	61.9	
1979 December 31	18.0	10.6	.2	.2	18.2	10.8	18.1	9.9	10.6	8.8	66.0	
1980 December 31	16.1	8.4	.4	.3	16.5	8.7	16.3	9.2	10.1	8.4	61.8	

## FUTURE NET REVENUES OF OIL, GAS LIQUIDS, GAS AND SULPHUR

The estimated future net revenues (sales and processing revenue less royalties and production expenses and development expenditures) from oil, gas and sulphur producing operations as of 1980 and 1979 December 31 are presented below. In determining future net revenues, future production is priced on the basis of year end prices except where contractual fixed and determinable escalation provisions exist. In the case of oil produced in Canada, a price increase of \$6.29 per cubic mètre (\$1 per barrel) effective 1980 January 01 was also reflected in determining 1979 December 31 net revenues. A further price increase of the same amount effective 1981 January 01 has been reflected in 1980 December 31 net revenues. Royalties are computed based on law, regulations and agreements existing at the respective year ends. The Petroleum and Gas Revenue Tax computed at 8% of sales before provincial royalties, less operating expenses announced under the Canadian government's National Energy Program in 1980 and effective 1981 January 01 has been reflected in the net revenues determined at 1980 December 31. Future production expenses and development expenditures are estimated on the basis of current experience with no provision for future inflation and exclude administrative, interest and income tax expenses. The processing revenue arises from processing gas for other companies in Canada under long term contracts and is included in net revenues as it extends the life of the Company's gas processing facilities.

	1980 December 31					1979 December 31				
	Reserves					Reserves				
	Canada	United States	Total	Processing Revenue	Total	Canada	United States	Total	Processing Revenue	Total
(millions)										
Proved developed and undeveloped reserves										
1981	\$ 202	\$ 16	\$ 218	\$ 21	\$ 239	\$ 175	\$ 8	\$ 183	\$ 3	\$ 186
1982	215	13	228	21	249	166	6	172	7	179
1983	203	8	211	18	229	191	5	196	10	206
Remaining years	2,001	26	2,027	193	2,220	1,510	15	1,525	134	1,659
	\$2,621	\$ 63	\$2,684	\$ 253	\$2,937	\$2,042	\$ 34	\$2,076	\$ 154	\$2,230
Present value at 10%	\$1,239	\$ 46	\$1,285	\$ 133	\$1,418	\$1,096	\$ 25	\$1,121	\$ 67	\$1,188
Proved developed reserves only										
1981	\$ 204	\$ 15	\$ 219	\$ 21	\$ 240	\$ 175	\$ 9	\$ 184	\$ 3	\$ 187
1982	213	11	224	21	245	169	6	175	7	182
1983	202	7	209	18	227	190	4	194	10	204
Remaining years	1,689	25	1,714	193	1,907	1,352	10	1,362	134	1,496
	\$2,308	\$ 58	\$2,366	\$ 253	\$2,619	\$1,886	\$ 29	\$1,915	\$ 154	\$2,069
Present value at 10%	\$1,187	\$ 42	\$1,229	\$ 133	\$1,362	\$1,066	\$ 22	\$1,088	\$ 67	\$1,155

An analysis of the changes in present value of proved reserves for the years ended 1980 and 1979 December 31 follows:

	1980	1979
	(millions)	
Balance at beginning of year	\$1,188	\$ 782
Revisions to reserves proved in prior years	287	383
Revisions to gas processing revenues under contracts entered into in prior years	75	—
	1,550	1,165
New field discoveries and extensions	58	37
Future revenues from processing gas for others under long term contracts entered into during the year	—	74
Purchases of reserves	—	27
Projected development costs incurred	53	30
Production and processing revenue, net of production expenses	(243)	(145)
Balance at end of year	\$1,418	\$1,188

# RESERVE RECOGNITION ACCOUNTING

(unaudited)

Reserve Recognition Accounting (RRA) is a new method of accounting for oil and gas producing operations originated by the United States Securities and Exchange Commission in the interests of achieving more meaningful financial reporting. The new method, based on valuations of proved reserves, is in the development stage and while its feasibility is assessed, the information is presented as supplemental unaudited data to the historical financial statements.

## STATEMENT OF RRA POLICIES

Under RRA, earnings are recorded in the year in which reserves are determined to be proved and when revisions are made to prior years' reserve estimates. Annual changes in the value of proved reserves included in determining earnings under RRA are as follows:

- (1) New field discoveries and extensions — the value of additional proved reserves located in new fields or extensions of fields discovered in prior years added from exploratory and development drilling in the current year.
- (2) Increases in prices — represents the approximate effect of changes in prices from the previous year end determination in RRA values.
- (3) Interest factor — accretion of discount — recognizes the effect of the passage of time in the calculations of the discounted future net revenues and is calculated at the discount rate of 10% of the value of the proved reserves at the beginning of the year.
- (4) Other — includes the net effect of all other changes in the RRA valuation.

The value of the reserves is determined as follows:

- (1) Estimates are made of quantities of proved reserves and the future periods during which they are expected to be produced.
- (2) The estimated future production is priced on the basis of year end prices except where contractual fixed and determinable escalation provisions exist. Also in the case of oil produced in Canada, the price increase approved in 1979 under a federal-provincial agreement to be effective 1980 January 01 has been reflected in the 1979 calculations. A further price increase announced in 1980 and effective 1981 January 01 has been reflected in the 1980 calculations.
- (3) The future revenues so determined are reduced by estimated future royalties, production expenses and development expenditures. In addition the Petroleum and Gas Revenue Tax announced under the Canadian government's National Energy Program in 1980 and effective 1981 January 01 has also been reflected in 1980 computations.
- (4) The present value of the resulting net revenues is then determined, using a 10% discount factor.

The value of future revenues from processing gas for others under long term contracts entered into during the year is included with the RRA earnings from proved reserves. Such revenues extend the life of the Company's gas processing facilities.

The costs of exploration and development activities are deducted from additions to proved reserves. This includes acquisition of unproven properties and expenditures on property rentals, geological and geophysical, exploration and development drilling and plant and equipment. The cost of property acquisitions and exploratory drilling are deferred pending evaluation of the properties as either productive or non-productive at which time they are deducted from the value of additions to proved reserves in the year of such determination.

Income taxes have been accounted for by the tax allocation method with differences between total income tax expense and taxes currently payable reflected as deferred income taxes.

Summary of Oil, Gas and Sulphur Operations  
 Prepared on the Basis of Reserve Recognition Accounting  
 For the Years Ended 1980 and 1979 December 31  
 (unaudited)

	1980	1979
	(millions)	
Additions to proved reserves		
New field discoveries and extensions	\$ 58	\$ 37
Revisions to reserves proved in prior years		
Increases in prices	473	282
Petroleum and Gas Revenue Tax	(148)	—
Interest factor - accretion of discount	112	78
Other	(150)	23
Total revisions to proved reserves	287	383
Total additions to proved reserves	345	420
Future revenues from processing gas for others		
Contracts entered into during the year	—	74
Revisions of amounts under contracts entered into in prior years	68	—
Interest factor - accretion of discount	7	—
Total additions to processing revenues	75	74
Total revenues	420	494
Less related capital and exploration expenditures		
Acquisition of unproved properties	26	37
Exploration	92	70
Development	53	30
	171	137
Change in deferred costs	(15)	(53)
Development costs considered in valuation of proved reserves	(53)	(30)
Total related costs	103	54
Earnings before other revenues and expenses, and income taxes	317	440
Deduct		
Administration, interest and other expenses	28	21
Investment and other income	(12)	(17)
	16	4
Earnings before income taxes	301	436
Provision for income taxes	201	182
RRA net earnings	\$ 100	\$ 254
Net earnings of oil, gas and sulphur operations prepared on a historical cost basis		
Earnings before income taxes	\$ 156	\$ 77
Income taxes	77	31
Net earnings	\$ 79	\$ 46

#### ANALYSIS OF THE RRA PRESENTATION

The following comments are made on the results of oil, gas and sulphur operations as determined under RRA.

The new reserves added in 1980 were valued at \$58 million resulting mainly from discoveries at Hanlan in Alberta and in North Dakota. The 1979 discoveries were valued at \$37 million, principally from discoveries at Brown Creek, Gold Creek and Rainbow Lake in Alberta, and in North Dakota. These discoveries include the value of proved reserves only and do not recognize additional probable reserves discovered during each year.

The revisions to reserves discovered in prior years amounting to \$287 million in 1980 and \$383 million in 1979 includes the effect of price changes, interest factor — accretion of discount and changes in previous estimates. Price increases, the total value of which was \$473 million in 1980 and \$282 million in 1979 are the most significant revisions and reflect higher prices in effect this year for all products, particularly sulphur. In 1980, inclusion of the Petroleum and Gas Revenue Tax, part of the Canadian government's National Energy Program announced in 1980 October, has reduced the present value of future revenues of prior years' discoveries by \$148 million. The interest factor — accretion of discount arises from the use of the discounted cash flow technique under RRA and reflects that as the time of producing the reserves approaches, the discount becomes smaller and the RRA valuation increases. The remaining revisions include changes in estimates of quantities, royalties, production rates and development expenditures, all relating to prior years' discoveries.

The Company has been processing gas for other companies at its Ram River plant for a number of years. The revenues derived therefrom had not been material, however, as a result of a new long term contract entered into in 1979 a significant increase in such revenue will occur in future years which will extend the life of the Company's gas processing facilities. For this reason, it is felt the present value of these future revenues and revisions thereof should be included with RRA earnings in order to present fairly the Company's gas operations.

The estimated value of additions to proved reserves and processing revenues are reduced by the costs incurred during the year relating to the discoveries. Acquisition costs of unproven properties and exploratory drilling are in part deferred in the calculations pending a determination of whether proved reserves have been found. Development costs for the year, which includes development drilling and plant and equipment of \$53 million in 1980 and \$30 million in 1979 which had been estimated in determining the present value of reserves at the beginning of the year and revisions thereof are deducted from total costs incurred to arrive at costs of \$103 million in 1980 and \$54 million in 1979 associated with the revenues from discoveries and revisions.

Other items relating to oil, gas and sulphur operations included in determining RRA earnings were administrative, interest and other expenses of \$28 million and \$21 million and investment and other income of \$12 million and \$17 million in 1980 and 1979 respectively.

The provisions for income taxes includes deferred and current income taxes totalling \$201 million in 1980 compared with \$182 million in 1979, 67% and 42% of earnings before such taxes. The main difference between these rates and the combined federal and provincial rate is because certain deductions allowed for tax purposes such as tax depletion and the frontier exploration allowance do not offset the effect of other expenses such as royalties which are not wholly deductible in computing taxable income. The very significant increase in effective rate in 1980 is due to deduction of the Petroleum and Gas Revenue Tax in determining RRA revenues, which tax is not deductible in computing income taxes.

## CONSIDERATIONS IN INTERPRETING RRA RESULTS

The Company is concerned about the possible misinterpretation of the RRA data and cautions the reader with respect to its use. RRA data is conservative in that additional probable reserves from presently held properties and the effect of future price increases are not considered. Another major shortcoming is that reserve determinations can not be precise. The estimation of newly discovered reserves is far more imprecise than for reserves which have produced for many years. Accordingly, revisions to previous estimates, some of which may be material, will become necessary in the future as more information comes available and experience is gained. Also the value of unproven properties is not recognized despite the fact exploration effort has been expended and the market place values such properties. This is of particular concern to the Company in view of its very substantial holdings in frontier areas. RRA suffers from the defect that a one year reporting period is too short to accurately reflect the true exploration cycle. Exploration and development takes place over a long period and many years may elapse before the outcome is known and the true economic results assessed. Yet, RRA requires exploration costs in the form of property rentals and geological and geophysical expenditures which will obviously benefit the future be deducted in determining RRA earnings in the year incurred.

The concept of RRA is in the development stage and despite its shortcomings the Company welcomes the opportunity to participate in the development of more meaningful financial reporting. It is expected that over the next few years, as development and experimentation takes place, changes will be necessary in the RRA presentation and the final pronouncements on the subject may require modification of the information currently presented.

# TEN YEAR SUMMARY

(All dollar amounts, except amounts per share, are in thousands of Canadian dollars)

## Financial

	1980	1979	1978	1977	1976	1975	1974	1973	1972	1971
<b>Earnings</b>										
Revenues										
Sales — oil and gas liquids	111,869	87,965	71,067	63,230	56,014	51,550	45,302	34,936	26,546	21,358
— gas	68,474	47,360	53,948	48,754	43,262	23,274	12,803	13,639	9,568	1,581
— sulphur	76,338	22,301	13,628	9,462	7,079	7,213	6,904	(100)	270	60
— coal	52,981	41,593	44,031	33,026	30,185	22,459	—	—	—	—
Other oil and gas production income	10,650	5,690	5,673	3,904	2,791	1,249	—	—	—	—
Total production income	320,312	204,909	188,347	158,376	139,331	105,745	65,009	48,475	36,384	22,999
Prior years' royalty rebates	—	8,750	—	—	—	—	—	—	—	—
Investments and other income	17,328	10,465	6,747	6,364	5,730	5,251	5,809	5,471	4,865	4,887
Total revenues	337,640	224,124	195,094	164,740	145,061	110,996	70,818	53,946	41,249	27,886
Expenses										
Production — oil, gas and sulphur	25,831	20,313	15,460	14,691	12,982	11,651	9,215	7,047	6,069	2,683
— coal	47,105	41,978	42,332	28,072	21,862	16,607	—	—	—	—
Administrative and foreign exchange	23,986	20,210	15,442	12,553	12,093	8,906	5,840	4,990	4,874	4,516
Interest	27,521	18,113	7,525	4,691	4,305	3,865	287	629	712	610
Exploration, including rentals and unproductive drilling	41,407	45,366	26,520	10,533	17,938	16,142	13,821	14,604	7,702	8,460
Depletion, depreciation and impairment of lands	42,156	21,956	18,219	20,094	17,024	17,639	16,231	11,262	6,806	5,833
Total expenses	208,006	167,936	125,498	90,634	86,204	74,810	45,394	38,532	26,163	22,102
Net earnings before income taxes	129,634	56,188	69,596	74,106	58,857	36,186	25,424	15,414	15,086	5,784
Income taxes — current	35,873	5,678	26,918	44,341	26,879	14,640	—	—	—	—
— deferred	28,704	17,893	11,460	2,440	8,675	5,160	13,252	4,475	4,519	2,841
Net earnings before extraordinary gain	65,057	32,617	31,218	27,325	23,303	16,386	12,172	10,939	10,567	2,943
Extraordinary gain	—	—	—	—	8,916	—	—	—	—	—
Net earnings	65,057	32,617	31,218	27,325	32,219	16,386	12,172	10,939	10,567	2,943
Per share	3.02	1.51	1.44	1.27	1.54	0.79	0.59	0.53	0.51	0.14
Cash flow from operations	178,021	115,668	87,419	59,908	67,055	54,909	55,476	41,280	29,594	20,077
Per share	8.26	5.37	4.06	2.78	3.21	2.65	2.69	2.00	1.44	0.97
Dividend	12,935	10,132	8,408	6,898	6,188	6,188	4,126	3,094	—	—
Per share	0.60	0.47	0.39	0.32	0.30	0.30	0.20	0.15	—	—
Net earnings by lines of business										
Oil, gas and sulphur — Canada	160,007	89,493	86,180	85,529	69,549	47,673	32,506	17,514	16,491	10,083
— United States	(688)	(4,661)	(2,358)	(4,615)	(3,902)	(6,780)	(5,629)	(494)	(317)	(2,921)
— Other foreign	235	(1,526)	(119)	(518)	(4,658)	(1,832)	—	—	—	—
Coal	— United States	(3,472)	(8,752)	(4,813)	(288)	2,915	2,379	—	—	—
Mining	— Canada	(3,206)	(1,998)	(1,774)	(1,314)	(1,144)	(1,738)	(1,689)	(1,523)	(859)
	— United States	(209)	(306)	(62)	(189)	(95)	(80)	(1)	—	(1,075)
Office buildings — Canada	2,027	1,308	815	655	562	502	524	546	483	307
Other — Foreign	562	1,927	(393)	—	—	—	—	—	—	—
Unallocated expenses	(25,622)	(19,297)	(7,880)	(5,154)	(4,370)	(3,938)	(287)	(629)	(712)	(610)
Extraordinary gain	—	—	—	—	8,916	—	—	—	—	—
Income taxes	(64,577)	(23,571)	(38,378)	(46,781)	(35,554)	(19,800)	(13,252)	(4,475)	(4,519)	(2,841)
<b>Financial Position</b>										
Current assets	221,757	86,249	79,124	105,301	58,433	36,916	30,990	20,408	17,420	33,312
Investments and other assets	17,261	14,427	12,804	6,539	7,227	3,621	3,986	3,575	5,955	5,840
Exploratory drilling in progress	25,218	16,073	16,370	2,124	12	1428	1,093	2,332	1,219	2,826
Properties, plant and equipment — net	515,459	424,161	308,706	275,653	249,670	228,186	154,991	141,965	146,767	124,153
	779,695	540,910	417,004	389,617	315,342	270,151	191,060	168,280	171,361	166,131
Current liabilities	130,413	58,375	48,225	80,306	33,553	30,159	12,301	6,058	7,424	4,714
Deferred income	—	—	—	—	—	—	14,852	23,252	29,026	42,059
Long term debt	238,373	152,934	79,556	54,359	49,704	55,894	1,619	1,751	1,777	1,704
Deferred income taxes	106,002	77,299	59,406	47,945	45,505	29,622	24,462	8,003	3,528	(991)
Shareholders' equity	304,907	252,302	229,817	207,007	186,580	139,624	129,426	123,442	116,573	108,913
	779,695	540,910	417,004	389,617	315,342	270,151	191,060	168,280	171,361	166,131
<b>Properties, Plant and Equipment</b>										
Gross investment										
Oil, gas and sulphur — Canada	445,391	347,342	250,183	224,720	208,727	183,461	173,721	151,243	146,572	116,893
— United States	56,757	35,430	27,646	22,073	20,259	25,971	16,572	12,203	11,536	11,404
Coal	— United States	138,024	136,826	129,118	112,121	86,397	69,417	—	—	—
Office buildings	— Canada	24,153	21,580	11,124	8,753	8,753	8,753	8,753	8,752	8,751
Other	7,056	—	—	—	—	—	—	—	—	—
	671,381	541,178	418,071	367,667	324,136	287,602	199,046	172,199	166,860	137,048
Net investment										
Oil, gas and sulphur — Canada	324,239	254,701	168,861	155,358	152,609	139,069	139,634	127,892	132,727	109,875
— United States	47,049	29,687	13,005	8,851	9,021	15,104	8,613	6,958	6,555	6,423
Coal	— United States	117,462	121,950	119,136	105,837	82,050	67,640	—	—	—
Office buildings	— Canada	19,653	17,823	7,704	5,607	5,990	6,373	6,744	7,115	7,485
Other	7,056	—	—	—	—	—	—	—	—	—
	515,459	424,161	308,706	275,653	249,670	228,186	154,991	141,965	146,767	124,153
Exploratory drilling in progress										
— Canada	23,433	15,353	15,839	2,010	12	1,201	796	1,906	1,219	2,826
— United States	1,785	720	531	114	—	227	297	426	—	—
	25,218	16,073	16,370	2,124	12	1,428	1,093	2,332	1,219	2,826

	1980	1979	1978	1977	1976	1975	1974	1973	1972	1971
<b>Capital and Exploration Expenditures</b>										
Oil, gas and sulphur										
Property acquisitions — Canada	23,835	17,381	11,333	9,004	972	1,390	2,704	1,379	3,018	828
— United States	2,048	8,931	1,310	227	3,592	919	2,363	665	121	—
	25,883	26,312	12,643	9,231	4,564	2,309	5,067	2,044	3,139	828
Exploration Expenditures										
Exploration drilling capitalized — Canada	35,610	22,900	5,935	2,898	4,081	1,468	3,431	609	3,966	678
— United States	8,350	3,692	2,692	1,478	211	3,421	165	1	—	—
Exploration expensed — Canada	31,025	37,992	22,733	6,418	10,099	9,314	9,444	10,847	5,983	6,188
— United States	7,599	3,918	2,077	2,342	3,051	3,981	2,785	210	45	378
— Other	(235)	1,526	119	518	3,766	1,278	—	—	—	—
Increase (decrease) in exploratory drilling in progress — Canada	8,081	(929)	13,829	1,998	(1,189)	405	(1,110)	687	(1,607)	2,105
— United States	1,065	189	417	114	(227)	(70)	(129)	426	—	—
	91,495	69,288	47,802	15,766	19,792	19,797	14,586	12,780	8,387	9,349
Development expenditures										
Development drilling — Canada	5,077	6,803	3,515	3,269	3,629	1,900	1,054	964	2,577	1,972
— United States	7,926	2,044	593	36	332	48	—	—	16	—
Plant and equipment — Canada	36,977	19,503	10,606	2,724	2,058	9,189	18,503	6,593	22,174	32,694
— United States	3,421	1,267	978	140	191	376	196	—	—	—
	53,401	29,617	15,692	6,169	6,210	11,513	19,753	7,557	24,767	34,666
Total oil, gas and sulphur	170,779	125,217	76,137	31,166	30,566	33,619	39,406	22,381	36,293	44,843
Coal — United States	2,142	8,613	17,567	27,344	17,233	8,430	—	—	—	—
Office buildings — Canada	2,573	10,457	2,371	—	—	—	—	1	1	177
Mining exploration expensed — Canada	2,833	1,622	1,517	1,087	925	1,489	1,591	1,457	802	1,028
— United States	185	308	74	168	97	80	1	—	—	—
	3,018	1,930	1,591	1,255	1,022	1,569	1,592	1,457	802	1,028
Total expenditures	178,512	146,217	97,666	59,765	48,821	43,618	40,998	23,839	37,096	46,048
Acquisition of other companies	3,922	38,309	7,022	—	16,690	—	—	—	—	—
<b>Operating</b>										
<b>Sales</b>										
Oil and gas liquids (thousands of cubic metres per day)										
Before royalty — Canada	4.8	4.8	4.6	4.9	5.0	5.3	5.8	6.1	5.2	4.3
— United States	.2	.1	—	—	—	—	—	—	—	—
After royalty — Canada	2.7	2.7	2.7	2.8	2.9	3.1	3.6	5.0	4.4	3.5
— United States	.2	.1	—	—	—	—	—	—	—	—
Gas (millions of cubic metres per day) — Canada										
Before royalty	3.6	3.3	4.1	4.4	4.9	5.1	5.5	6.0	4.3	.9
After royalty	2.1	2.1	2.6	3.0	3.5	4.2	4.9	5.6	3.8	.8
Sulphur (thousands of tonnes) — Canada										
Before royalty	1,181	715	641	550	314	277	464	138	89	8
After royalty	997	616	554	481	277	248	441	133	74	7
Coal (thousands of tonnes) — United States	1,364	1,165	1,146	1,132	1,248	905	—	—	—	—
Average sales price per unit										
Oil and gas liquids — Canada	96.92	81.02	76.17	63.72	52.82	44.66	34.16	20.64	16.67	16.48
— United States	254.53	136.10	74.82	73.44	64.88	62.37	—	—	—	—
Gas	87.08	61.61	56.96	45.45	34.07	15.03	7.09	7.43	7.30	5.30
— Canada	90.37	42.00	63.32	24.49	24.49	17.94	—	—	—	—
Sulphur	76.41	35.07	19.21	15.86	18.17	28.96	15.67	5.00	3.92	8.57
Coal	38.84	35.70	38.40	29.18	24.19	24.82	—	—	—	—
Sulphur Production (thousands of tonnes)	828	690	997	1,041	999	893	992	1,029	480	27
Net Property Holdings (thousands of hectares)										
Oil and gas — Canada	6,760	9,520	10,124	13,235	14,243	7,627	10,232	11,155	12,791	15,047
— United States	168	160	149	168	181	221	62	10	10	10
— Other foreign	—	—	—	157	157	338	—	—	—	—
Coal — United States	16	11	12	12	13	13	—	—	—	—
Mining — Canada	87	75	40	47	85	150	435	601	1,021	955
<b>Proved Reserves</b>										
Oil and gas liquids (millions of cubic metres)										
Before royalty — Canada	16.3	18.5	19.9	20.9	22.5	24.3	26.2	28.1	30.4	35.6
— United States	.4	.2	.1	—	—	—	—	—	—	—
After royalty — Canada	8.5	10.8	10.7	11.2	12.9	14.5	16.4	23.3	25.3	29.6
— United States	.3	.2	.1	—	—	—	—	—	—	—
Gas (billions of cubic metres) — Canada										
Before royalty	23.6	21.4	20.3	18.9	20.1	23.2	24.8	26.8	30.7	33.8
After royalty	13.3	12.4	12.5	11.4	14.3	19.3	22.4	24.9	27.5	29.5
Sulphur (millions of tonnes) — Canada										
Before royalty	11	11	12	12	13	13	13	13	14	13
After royalty	9	9	10	10	11	12	12	11	13	11
Coal (millions of tonnes) — United States	62	66	62	51	52	52	—	—	—	—
Employees at year end	1,048	947	1,086	888	802	751	354	348	350	335
Shares Outstanding (thousands) at year end	21,565	21,558	21,558	21,558	21,558	20,628	20,628	20,628	20,626	20,216

# Corporate Information

## Directors

Jacques Bonnet de la Tour  
Vice-President, Finance, SNEA  
Paris, France  
Appointed 1980 July 01

Jean-Yves Chereau  
Manager for Americas-Australia, SNEA,  
Paris, France  
Appointed 1980 February 19

William D. Clark  
President, Clark Young & Associates,  
Calgary, Alberta  
Appointed 1967 February 22

Bernard F. Isautier  
President, Aquitaine Company of Canada Ltd.,  
Calgary, Alberta  
Appointed 1978 September 19

D. Carlton Jones  
President, Carlton Resource Management Ltd.,  
Calgary, Alberta  
Appointed 1977 November 25

François Morel  
Area Manager for North America, SNEA,  
Pau, France  
Appointed 1978 May 23

H. Gordon Pearce  
Partner in the economic consulting firm of  
Foster Research,  
Calgary, Alberta  
Appointed 1980 April 15

Neil F. Phillips  
Partner in the law firm of Phillips & Vineberg,  
Montreal, Quebec  
Appointed 1964 January 09

John D. Redfern  
President and Chief Executive Officer,  
Canada Cement Lafarge Ltd.,  
Montreal, Quebec  
Appointed 1980 April 15

Gilbert Rutman  
Deputy Chairman and  
Executive Vice-President, SNEA,  
Paris, France  
Appointed 1964 January 09

Gordon D. deS. Wotherspoon  
Chairman of the Board of Directors,  
Eaton/Bay Financial Services Limited,  
Toronto, Ontario  
Appointed 1970 May 05

## W. Stewart Wright

General Counsel and Corporate Secretary,  
Aquitaine Company of Canada Ltd.,  
Calgary, Alberta  
Appointed 1980 April 15

## Key Personnel

Bernard F. Isautier  
President

Michael E. Hriskevich  
Senior Vice-President Exploration and Special  
Projects

Claude R. M. Bertrand  
Vice-President Finance and Treasurer

Jean M. Faber  
Vice-President Petroleum Exploration

Henri R. Martial  
Vice-President Production

Jean-Jacques Pascal  
Vice-President Coal

Frank Ricciuti  
Vice-President Corporate Development

W. Stewart Wright  
General Counsel and Corporate Secretary

Robert C. Murray  
Manager Marketing (Oil, gas, sulphur,—  
Canada)

Yves Godechot  
Executive Vice-President, Al-Aquitaine

## Incentive Compensation Committee

D. Carlton Jones (Chairman)  
Jean-Yves Chereau  
Neil F. Phillips  
John D. Redfern  
Gordon D. deS. Wotherspoon

## Audit Committee

Gordon D. deS. Wotherspoon (Chairman)  
Jean-Yves Chereau  
D. Carlton Jones  
H. Gordon Pearce  
Neil F. Phillips

## Finance Committee

William D. Clark (Chairman)  
Bernard F. Isautier  
H. Gordon Pearce

## **Auditors**

Touche Ross & Co.  
Chartered Accountants  
Calgary, Alberta

## **Registrars and Transfer Agents**

Montreal Trust Company, Calgary  
Montreal, Toronto and Vancouver  
Citibank N.A., New York

## **Exchange Listings**

Toronto Stock Exchange  
Montreal Stock Exchange  
American Stock Exchange

## **Annual Meeting**

The Annual Meeting of Shareholders will be held 1981 April 28 at 10:00 a.m. in the Auditorium, 2nd Floor, Aquitaine Tower, 540 5th Avenue S.W., Calgary, Alberta.

Copies of the Company's Annual Report in Form 10-K filed with the United States Securities and Exchange Commission are available to shareholders without charge upon request to W. S. Wright, Corporate Secretary of the Company.

Si vous préférez recevoir le rapport annuel de la compagnie en français, veuillez en informer le Secrétaire, Monsieur W.S. Wright.

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## **Al-Aquitaine Exploration, Ltd.**

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410 Seventeenth Street  
DENVER, Colorado, U.S.A. 80202

## **Aquitaine Pennsylvania, Inc.**

Three Parkway Centre  
PITTSBURGH, Pennsylvania, U.S.A. 15220

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